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Establishment of an Organisational and Economic Mechanism for Integration and Cooperation in the Agricultural Sector: a Systemic Approach

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► **Abstract.** The growth of production efficiency in the agricultural sector of the economy is based on the use of various factors – organisational, economic, labour, material, motivational, etc. Among them, organisational and economic ones are a priority, which can also include integration relations. The mechanism of action of organisational and economic foundations of integration relations in the context of a systematic approach is rather underinvestigated, which determined the topic of research. The purpose of the study is to substantiate the theoretical, methodological, and practical foundations of building an organisational and economic mechanism of integrated structures from the standpoint of a systematic approach. The methodological basis of the study was the provisions of institutional economic theory and system analysis. Monographic, normative, graphic, abstract and logical methods and approaches to generalising results are used. The economic essence of the organisational and economic mechanism of integrated structures in the agricultural sector of the economy is determined. The essence of integrated structures and integrative formations from the standpoint of consistency is substantiated. The concepts of "integrated structure" and "cooperative" have been clarified. The interdependence of dysfunctions is determined – an integrated structure and an agricultural cooperative. The study results can be taken into account in the development of programmes: determining priorities for the development of integration and cooperative structures, developing laws and regulations for the establishment and development of cooperation and integration in the agricultural sector of the economy

► **Keywords:** agricultural cooperative, integration and cooperative structures, integration associations, mechanism of integrated structures, agricultural holdings, business entity, integrative formations, clusters

► Introduction

Literature sources on the development of integration structures focus on the essence of integration and cooperation and economic efficiency in the development of the agricultural sector of the economy. The principles of their organisation and economic mechanisms of functioning are ignored. Despite certain advantages of these formations, in practice, due to insufficiently disclosed mechanisms of their activities, the creation of these structures does not meet the needs. Therefore, cooperatives and other integration associations remain in the minority and do not fully perform their functions in the development of the agricultural economy and solving a number of social issues.

Thus, out of the total number of agricultural enterprises, 47,760 cooperatives (production and

service) amounted to 2,200 (4.6%), while farms and private enterprises – 15,672 (32.8%), farms – 31,850 (62.7%) [1]. As evidenced by foreign experience, the development of integration cooperation is gaining popularity both in the agricultural sector and in other areas of agro-industrial production. Participation in agro-industrial integration formations is considered as a means of increasing the competitiveness of their production, and obtaining the effect of the cost economy. To activate integration processes in the agricultural sector, it is necessary to develop a functioning organisational and economic mechanism for the creation and functioning of integrated associations, agricultural cooperatives, which would ensure the effective functioning of such structures and avoid on-farm contradictions [2].

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World experience confirms the high economic efficiency of cooperative-integrated systems and their social orientation. However, in Ukraine, the advantages and positive aspects of cooperation and integration are not properly spread, because there are problems with the implementation of the national policy, insufficient understanding of the essence of integrated processes of business entities, and financial difficulties in organising cooperatives. Although each agricultural producer in the process of production activities has to overcome significant problems associated with shortcomings in material and technical support, the negative effect of competitors, intermediaries, and an increase in the price of goods, which entails the transition of the cooperative initiative to their side. Instead, cooperative members are more likely to receive a one-time benefit compared to the prospect of participating in a cooperative. Different approaches are used to reduce the impact of these and other problems. These include the establishment of optimal relationships with other business entities. The development of such relationships leads to the establishment of close integration ties, in particular, on the principles of cooperation. Integration processes are typical for all sectors of the economy, but in agriculture, based on the specifics of the industry, they are the most necessary. As Ukrainian and foreign practice shows, they provide positive results both for the associations themselves and for the overall society (balanced intra-economic relations, socio-economic mutually beneficial partnerships, etc.).

However, in Ukraine, as of the end of 2021, out of a total of 47,523, agricultural production cooperatives accounted for 950 (1.9%), and farms accounted for 31,851 (66.3%). In addition, 1,279 agricultural cooperatives produce 0.5% of gross production; 120 agricultural holdings produce 16% of gross output [1].

The study of problematic issues of the formation of integration structures is spread by public demand. The importance and role of integration structures and cooperatives in solving the problems of improving the efficiency of the agricultural sector of the economy and market competitiveness are quite thoroughly described in the papers of Ukrainian and foreign researchers.

The investigation of theoretical, methodological, and practical foundations of building an organisational and economic mechanism of integrated structures plays an important role in the development of agro-industrial integration and cooperation in the agricultural sector.

V. Andriychuk [3], proves that in the process of capitalisation, integrated organisational and legal forms have appeared in the form of integral enterprises that create the agricultural sector on the basis of separate or structural divisions. G. Hegel [4] revealed the concept of social cooperation in the ideas of the cooperative state of law. S. Prilipko [5] focuses his attention on the development of service cooperation in rural areas, G. Cherevko [6] notes that agricultural holdings are a new integration form of management organisation in the agricultural

business. M. Malik [2; 7; 8], focuses on the principles of development of agricultural cooperation. O. Sakovska investigates the role of cooperation in the development of the agricultural market [9-11].

O.A. Hryshchova, O.V. Vasilin [12] improved the organisational and economic mechanism for managing the intellectualisation of labour activity with the help of its features into elementary, functional, and process ones. The line of A. Hutorov's research [13] allowed investigating the features of the development of the agricultural sector of the economy based on the development of integration processes, by substantiating systemic shortcomings on the path of progress of the national economy, considering trends of inclusivity.

A.Yu. Ermakov, M.R. Sudomir [14], giving an assessment of the organisational and economic mechanism of growth of competitive stability of enterprises, expressed the opinion that it should be supplemented with such approaches as axiological, technological, structural and functional, system, synergetic, process, strategic, managerial, sociological, cybernetic, and communication.

O.V. Moroz, V.M. Semtsov, H.S. Kukel, N.F. Mindziuk [15, p. 163] note that the effective functioning of the agro-industrial complex system is not possible without the use of processes of specialisation and concentration of production in agriculture, integration mechanisms (corporatisation, clustering, cooperation).

Another vital area of solving this problem is the study by O.V. Khodakivska and O.M. Mohylnyi [16], which proposes to step up the implementation of solving the peasant question based on the institutional development of the agricultural sector of the economy. The implementation of modelling the impact of resource factors on agricultural products was also emphasised by A. Potapov [17].

R. Dymczyk et al. [18] proposed indicators using the hierarchy analysis method and conducted a comparative assessment of factors in the establishment of social capital on the example of agricultural holdings in Ukraine. O.G. Shpykuliak [11], Yu.A. Lupenko and M.I. Malik [7; 19] prove that despite the institutional essence of the coexistence of agricultural production, integration ties are an important factor in organisational and economic support for the implementation of the potential of integrated formations in ensuring stable development. C.A. Moreno-Hurtado, D.A. Ochoa-Jiménez, G.L. Izquierdo-Montoya [20] considered a simplified model of economic growth of social capital.

O. Odintsov, T. Yevtukhova, E. Vasytkonova, V. Kunchenko-Kharchenko [21] proved that optimisation of the tax burden on agricultural enterprises allowed directing the resource potential to increase production volumes and increase tax revenues from the industry. M. Humeniuk, D. Shelenko, N. Kovalchuk, I. Balaniuk, I. Kozak-Balaniuk [22] substantiated the impact of innovations on increasing sales of enterprises.

To develop a functioning organisational and economic mechanism, it is necessary to consider the opinions of various researchers regarding its essence.

Thus, O.A. Hryshchova, O.V. Vasilin suggest that the system of organisational and economic mechanism should be considered from the standpoint of the influence of its elements on management as a whole and on its objects, considering the components of the subsystems of motivation, stimulation, coordination, and regulation [12].

The authors of this study agree with the interpretation provided by O. Yu. Ermakov, M. R. Sudomir that the functioning of the organisational and economic mechanism reflects the integrity of the system of elements of competitive development of socio-economic formations [14]. The researchers distinguish three subsystems of stability of functioning of enterprises – provision, functioning, and target. The target subsystem includes market, production, financial, and social goals; in addition, it includes methods, levers, tools, and organisational and economic processes [14].

N.V. Surzhenko and I.V. Ahieieva [23] proposed to consider the mechanism of enterprise management considering the influence of organisational and economic levers on the efficiency of the enterprise. However, a number of issues related to the problems of a systematic approach to the establishment of an organisational and economic mechanism for the development of integrated structures remain insufficiently studied and require further consideration.

The purpose of the study is to evaluate and substantiate, from the standpoint of a systematic approach, the basis for building the organisational and economic mechanism of integrated structures in the agriculture sector of the economy of Ukraine.

► Materials and Methods

The information base of the study is the laws and regulations of Ukraine; materials of the Ministry of Agrarian Policy and Food of Ukraine, the Ministry of Economy of Ukraine, the Ministry of Finance of Ukraine, the State Statistics Service of Ukraine, financial statements of business entities, articles of national and international news agencies, studies by Ukrainian and foreign researchers on the development of the organisational and economic mechanism of integration and cooperation in the agrarian economy of Ukraine, the findings of previous studies by the authors, etc. The calculations were performed using modern computer technologies and analysis techniques. The research is implemented in 4 stages: analysis of statistical information and literature sources; investigation of historical Ukrainian and foreign experience; development of ways to build an organisational and economic mechanism for the functioning of integration structures and cooperative formations; formulation of conclusions and recommendations.

The main provisions of institutional economic theory and system analysis served as a theoretical and methodological platform of research. The system method of cognition is based on the historical experience of the development of integration processes in the agricultural sector of the economy, where the features of their functioning and economic

characteristics of separate integration structures and cooperatives are considered. Abstract and logical methods are widely used to determine the essence of the status of integration associations and cooperative formations, to consider identity and differences, and the features of cooperative formations as a special organisational and legal structure. To carry out empirical assessments and identify trends in the change and development of integration structures, monographic, graphical, and normative methods, approaches to generalising results were used to formulate conclusions and recommendations for establishing causal relationships when describing the development of certain groups of business entities. Trend analysis was used to build a forecast of annual changes in the number of agricultural cooperatives for 2030. The forecast for the establishment of cooperatives is based on the number of private farms producing marketable products. Provided that there is state support for such business entities, they can change their status and create integrated structures – simple societies and cooperatives.

► Results and Discussion

The agricultural sector is a component of the socio-economic diversity of economic relations and organisational and functional ties in society. Integrated economic structures from simple to complex can be used (attracted) in solving many existing problems (e.g.: shortcomings in the implementation of reforms and lack of social responsibility; deterioration of fixed assets; lack of professional management; lack of funds; lack of investment; unfavourable conditions for lending to business activities; raider seizures of enterprises and taking control of the most profitable types of agricultural business, etc.) of the agricultural economy. The simplest integrated structure can be an organisation based on a contract for joint activities of participants in a production contract, and others. More complex are integrated structures such as cooperatives, integrated associations with and without loss by participants of a legal entity. This includes agricultural holdings, agricultural firms, etc. [8].

In the process of research, scientists actively use multi-quantitative approaches and methods of complex analysis from the standpoint of a systematic approach to considering structures of various complexity. The essence of the system approach is a comprehensive study of both internal processes of the system and its external relations, dynamics of development and functioning. The systematic approach in economic processes (entrepreneurial activity) provides for the rational use of resources, the expediency of using which is aimed at achieving a single goal and therefore is considered as a single whole, as a system [13]. A qualitatively new structure can be a complex system as a set of interrelated subsystems that perform different functions, but are aimed at solving a common problem.

Cooperation and integration in the agricultural sector of the economy can be considered as a system that is aimed at improving the efficiency of industries

related to agricultural production – the production of grain, vegetables, milk, and their processing. Characteristic features of the functioning of the cooperative-integrated system in the agricultural sector of the economy are the mandatory participation of members of the association (enterprises or individual farms) in production and economic activities, achieving a common result – income, profit, and solving social problems.

To reveal the essence of the functioning of the “organisational and economic mechanism”, a systematic approach is used through the disclosure of the components of the mechanism. The study of the development of integrated structures and cooperatives shows that the organisational and economic mechanism of integration and cooperative enterprises should be considered both as a structure and as a process. The structure of the mechanism consists of its constituent elements (contracts, business plans, norms of conduct, legislative and legal standards, prices, investments, taxes), which are necessary for the creation and functioning of an organisational and legal structure. The organisational and economic mechanism as a process is characterised by methods and actions that are used in the organisation (creation) of an integration structure. Moreover, the components that form the mechanism differ in different organisational and legal structures. Integration structures are characterised by the development of production activities, while cooperatives are mainly aimed at the development of social capital.

To consider the features of building an organisational and economic mechanism, the authors of this study consider the features of the activities of individual business enterprises and cooperatives, in particular, the economic basis for the creation and operation of agro-industrial associations of the holding type. In Ukraine, the formation of holding companies was approved in 1994, according to Presidential Decree No. 224/94 “On Holding Companies...” [24]. This decree provided for their creation in the process of corporatisation and privatisation.

The organisational and economic mechanism of cooperation and integration is considered as a system of organisational, managerial, economic, and legal regulators of the existence and creation of new cooperative integrated structures and their effective functioning. To ensure the production activities of cooperatives and integrated structures, a system of resource and financial support, a marketing system, a system of economic regulation, management of distribution relations, and a system of labour motivation are necessary. Considering the multiplicity of systems, the construction of an organisational and economic mechanism includes an integral system of organisational, legal, and economic components. The functioning of the components of the economic mechanism while creating an appropriate institutional business environment would ensure the effective operation of cooperative and integrated structures.

Analysis of trends in integration processes in the agricultural sector of the economy shows that agro-industrial integration develops in the following

main areas: based on contracts with different validity periods; mergers and acquisitions of business entities; in the form of various independent structures that are created by combining the capital of individual business entities. The simplest form of integration is structures organised on the basis of contracts of process subjects with the integrator. However, this form does not affect the development of all integration participants equally. Individual participants (founders) try to build their relationships with other participants, especially for agricultural producers (integrators) not on an equivalent basis, but on the assignment of most of the created surplus value. In the process of developing integration, depending on the conditions, various organisational and legal structures are created (clusters, cooperatives, agricultural holdings, simple societies, associations, etc.). At the same time, the integrator is mainly an economically strong enterprise with sufficient investment potential [19].

The algorithm for building an integration and cooperative association includes components that form a system of organisational and economic structures. Each of these structures performs the corresponding functions in the operation of a mechanism that includes the organisational structure of enterprises, the system of functioning, the system of management and control, the system of property distribution relations [2]. For the rational operation of such a structure, measures are needed for state institutional and economic support for the development of cooperation in rural areas to strengthen the integration ties of small forms of management; the establishment of an effective mechanism for institutionalising industry associations; the introduction of programme measures to solve the production and sales problems of small agricultural producers, etc. This approach ensures effective interaction of all structural components that are aimed at maintaining the balance of on-farm relations, equivalence of exchange, and improving the effective activities of the association.

However, the organisational and economic mechanism depends on the organisational and legal form of the enterprise defined by the legislation. Different organisational and legal forms of management also provide for different mechanisms of distribution relations, the level of participation of subjects in the economic activities of the association. These can be cooperative forms of management – cooperatives and their associations, and corporate structures – agricultural holdings, agricultural firms, financial and industrial groups. Therefore, the choice of the organisational and legal form of management is carried out taking into account the purpose, available funds and the available production potential of the association’s participants. Specific feature is the availability of financial support and sources of financing. A significant part of them do not register subsidiaries in the locations of leased land, but turn them into structural divisions [14].

The basis of the agricultural holding “Astarta-Kyiv” is made up of agricultural firms, holdings “Nibulon”, “Prodekame”, “Kyiv-Atlantic Ukraine” – subsidiaries.

“Mironovsky khliboproduct” and “Avangard” are private joint-stock companies [25]. The establishment and functioning of the organisational and economic mechanism of integrated associations is significantly influenced by the management system, which would ensure sustainable development and respect for the economic interests of all participants. Changing or choosing a new management structure involves changing the elements of the management structure, since each integration association establishes its own management system, which should have characteristic features of correspondence between

the structural organisation and the environment. Thus, the agricultural holding “Astarta-Kyiv” uses a hierarchical management structure. General scheme of the organisational structure of the agricultural holding: shareholders – management company – industry directions – enterprises.

The Law of Ukraine “On Holding Companies” [26] defines a holding company as a joint-stock company that owns, uses, and disposes of a corporate block of shares in two or more corporate enterprises. At the beginning of 2022, 160 such structures operated in Ukraine. The land bank was 3.5 million hectares (Table 1).

Table 1. Size of land banks of the Top-20 agricultural holding formations

Agricultural holdings	2018		2019		2020		2021		2022*		2022* / 2018
	thsd ha	No.	thsd ha	No.	thsd ha	No.	thsd ha	No.	thsd ha	No.	thsd ha
Kernel Holding Sa	550.0	2	530.0	1	530.0	1	506.0	1	506.0	1	-44
Ukr Land Farming	570.0	1	500.0	2	500.0	2	475.0	2	475.0	2	-95
Mhp Se	370.0	4	370.0	4	370.0	3	370.0	3	370.0	3	0
NCH Agroprosperis	400.0	3	396.0	3	300.0	4	300.0	4	300.0	4	-100
Astarta-Kyiv	250.0	5	250.0	5	235.0	5	220.0	5	220.0	5	-30
Continental Farmers Group	165.0	6	195.0	6	195.0	6	195.0	6	195.0	6	30
Epizentr Agro	111.0	10	121.4	9	160.0	7	160.0	7	160.0	7	49
Harv East Holding	102.0	14	127.0	7	127.0	8	127.0	9	127.0	9	25
Imc Sa	129.6	7	123.9	8	123.9	9	120.0	10	120.0	10	-9.6
Ukrprominvest-Agro	116.5	9	120.0	10	120.0	10	120.0	11	120.0	11	3.5
Agroton Public	110.0	11	110.0	11	110.0	11	120.0	12	120.0	12	10
A Grein	110.0	12	110.0	12	110.0	12	110.0	13	110.0	13	0
Agricultural system technologies	110.0	13	110.0	13	110.0	13	150.0	8	150.0	8	40
Vit Agro	80.0	21	85.0	14	530.0	14	85.0	14	85.0	14	5
Privat Adgo Holding	85.0	16	85.0	15	500.0	15	85.0	16	85.0	16	0
Tas Agro	88.0	15	83.0	16	83.0	16	83.0	16	83.0	16	-5
Nibulon	82.5	17	82.5	17	82.5	17	82.5	17	82.5	17	0
Adgo Vista	82.0	18	82.0	18	82.0	18	80.0	18	80.0	18	-2
Svitanok	80.0	20	80.0	19	80.0	19	80.0	19	80.0	19	0
LNZ	70.0	23	80.0	20	80.0	20	80.0	20	80.0	20	10
Total Top-20	3,661.6	x	3,640.8	x	4,428.4	x	3,548.5	x	3,548.5	x	-113.1

Source: based on data from latifundist.com [27]

Explanation: *as of January 1, 2022

Such agricultural structures are also characterised by the efficiency of their labour. Average value of EBIDTA indicators (Earning Before Interest, Depreciation, Taxes and Amortisation – financial coefficient; performance indicator functioning of business entities in one industry; profit before taxes, depreciation charges, interest) among the largest in 2016-2020 was in “Mhp Se” (Myronivsky khliboproduct, private joint-stock company, agro-industrial

company) – UAH 1,107 per hectare in 2016. It is established that the leaders in revenue are Kernel Holding Sa and Mhp Se – USD 4.1 and USD 2.06 billion, respectively, the weakest – Agroton Public (USD 54.4 million) (Figs. 1-3). The financial success of Kernel Holding Sa and Mhp Se can be explained by the action of organisational and economic mechanisms and the scale of investment and innovation activity, and overall cost savings.

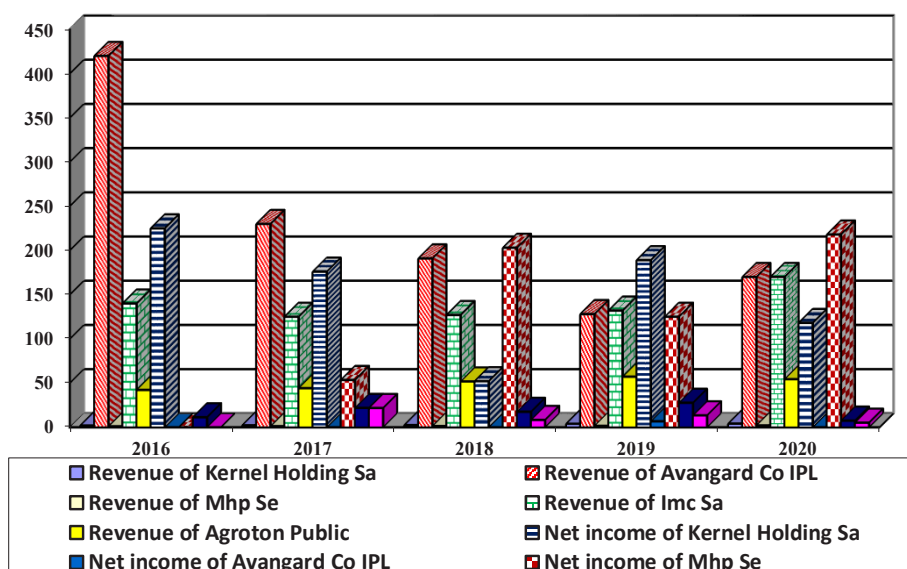


Figure 1. Revenue (turnover), net profit (loss) of agricultural holdings in 2016-2020, million USD

Source: based on data from latifundist.com [27]

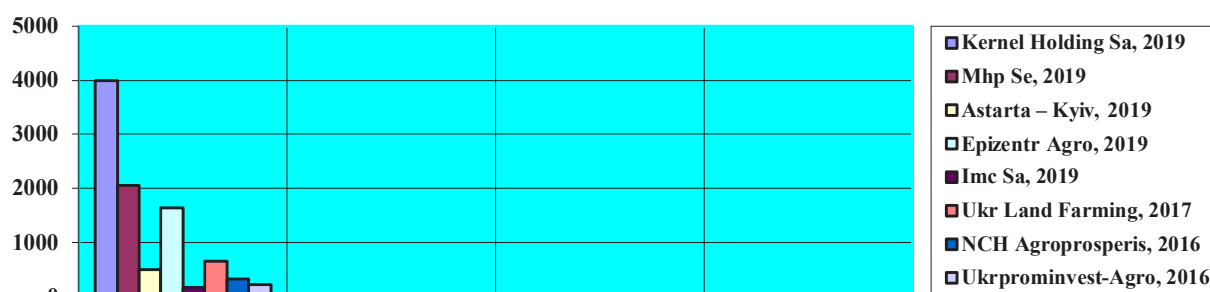


Figure 2. Income (revenue) of the largest agricultural holdings, million USD

Source: based on the infographic reference book “Agrosector of Ukraine” [28]

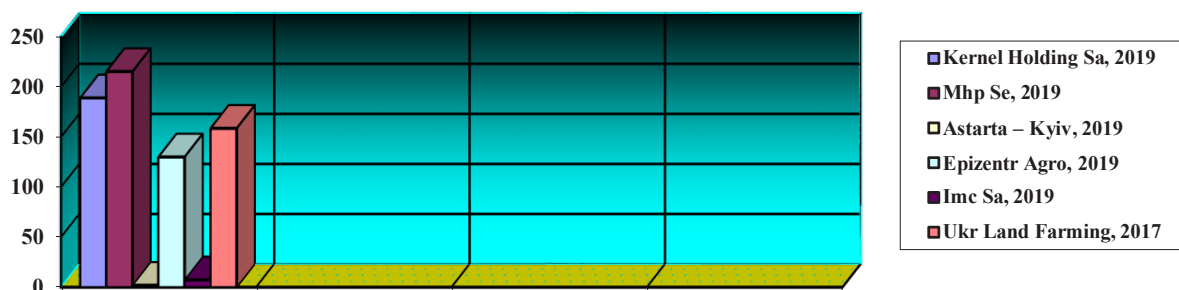


Figure 3. Net profit of the largest agricultural holdings, million USD

Source: based on the infographic reference book “Agrosector of Ukraine” [28]

Agricultural holdings include controlled (absorbed) agricultural enterprises. Subsidiaries specialise in the storage or processing of agricultural products. Marketing activities are implemented by a specialised division. The parent company conducts and controls planned, investment, financial and credit activities [16].

Studying integration processes among organisational and legal forms (simple societies, agricultural holdings, clusters, etc.), the authors found that cooperation occupies a special place.

The need for farmers to jointly solve existing problems of functioning and life activity reflects the essence of the socio-economic foundations of cooperation. The vast majority of farms where areas of up to 2 hectares of land are under cultivation need financial support. The level of production efficiency

and their material and technical support remain significantly lower compared to medium and large economic structures. For example, the largest financial losses were incurred by micro- and small-sized business entities that are focused on the production of niche products. Almost half of the output (45.6% in 2019) is produced by family-operated farms and small producers (44.1% of crop production and 51.0% of livestock production in 2019). In 2020, due to the pandemic (COVID-19), retail and wholesale markets, public catering establishments that are the main sales channels for products, especially fruit and vegetable, greens and meat and dairy products, were closed. In fact, the products of Ukrainian producers were forced out of the domestic market by import supplies. Farmers suffered significant losses. The state did not offer appropriate compensation for them.

Cooperation can contribute to the correction and improvement of functioning indicators. However, the share of agricultural cooperatives' products in the structure of the country's gross agricultural output is less than 1%. The potential of agricultural cooperation in Ukraine is still not realised. Despite the traditions of cooperation that existed in the development of Ukrainian society at the end of the 19th century, nowadays, the motivation to socialise this phenomenon remains destructive [7].

Qualifying the characteristics of agricultural cooperatives in Ukraine, there was a small number of them – about 1,350 units at the beginning of 2021, and only half of them are active. The processes of development of cooperative structures in agriculture are characterised by the variability of their availability and the instability of social capital as an institutional basis for broad expansion. The reasons for the unsatisfactory development of cooperation were the lack of a comprehensive national policy aimed at supporting agricultural cooperatives, low competitiveness of products produced in family-operated farms, cooperatives, sales markets, and a low level of opportunities for financial support of cooperatives' activities [9].

An increase in the number of farms contributes to the growth of a critical mass of potential participants in agricultural cooperatives. The interest of farmers in the development of agricultural cooperation is associated with an increase in the efficiency of functioning (minimal maintenance costs for their own production; an increase in the volume of agricultural production; the possibility of obtaining additional income based on the results of the sale of processed agricultural products; ensuring a high level of quality of their own products (with a greater share of added value, saving labour costs for preparatory, marketing, repair, transport, and other auxiliary work, etc.).

Rural households specialising in the production of fruit and vegetable products or milk can actively participate in the development of agricultural cooperatives. Additional incentives for this are the introduction and compliance with European quality standards. According to the estimates, the resumption of state support for the development of cooperatives from 2023 would significantly increase their number, which may reach almost 3,000 units by 2030 subject to appropriate funding and timely overcoming of the consequences of martial law (Figs. 4–7).

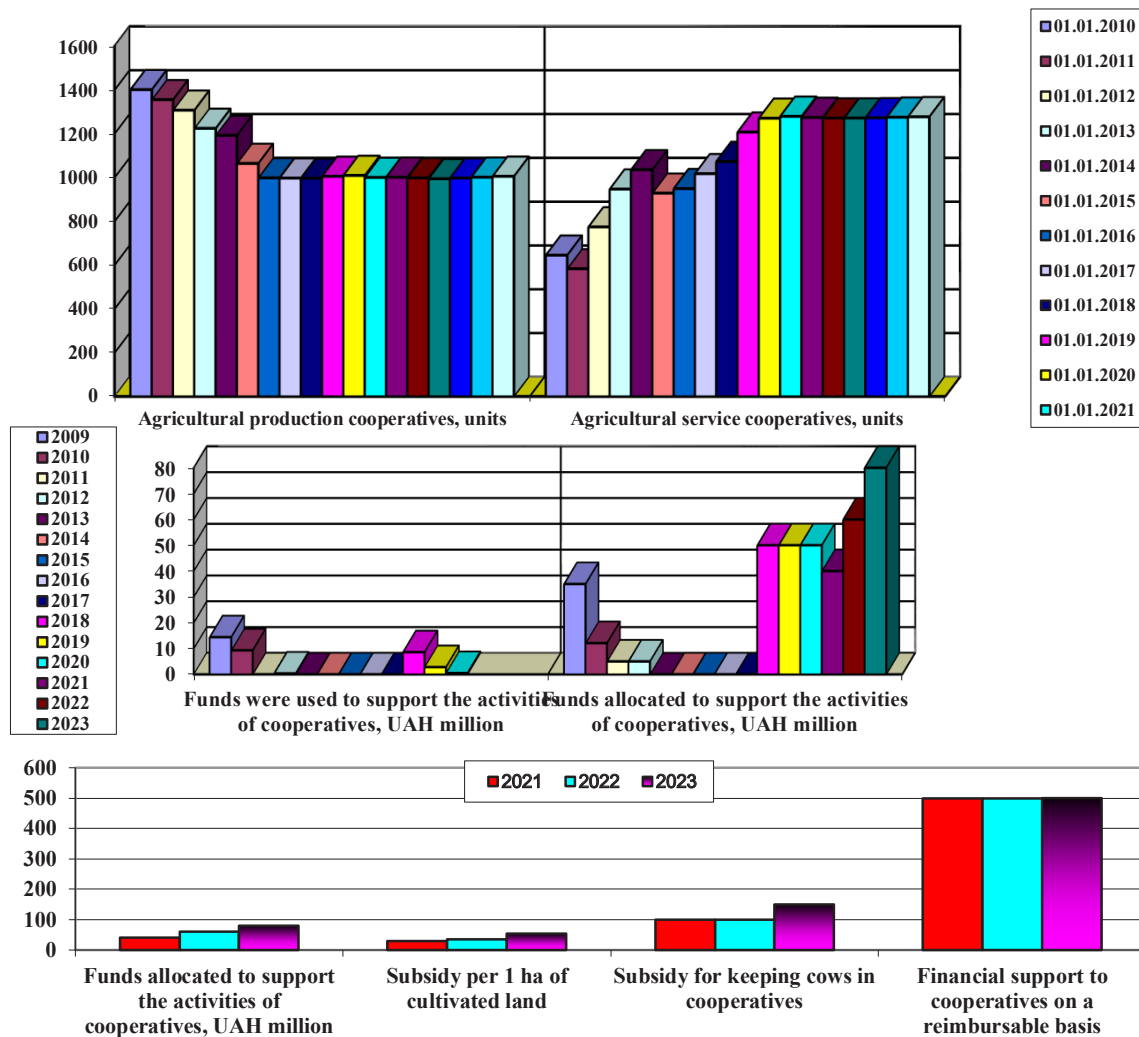


Figure 4-6. Dynamics of development of agricultural cooperatives at the appropriate level of state funding for the period up to 2025

Source: calculated using data from the Ministry of Agrarian Policy, the State Statistics Service of Ukraine, Food of Ukraine, and materials of the concept of development of farms and agricultural cooperation for 2021-2025 [29; 1; 31]

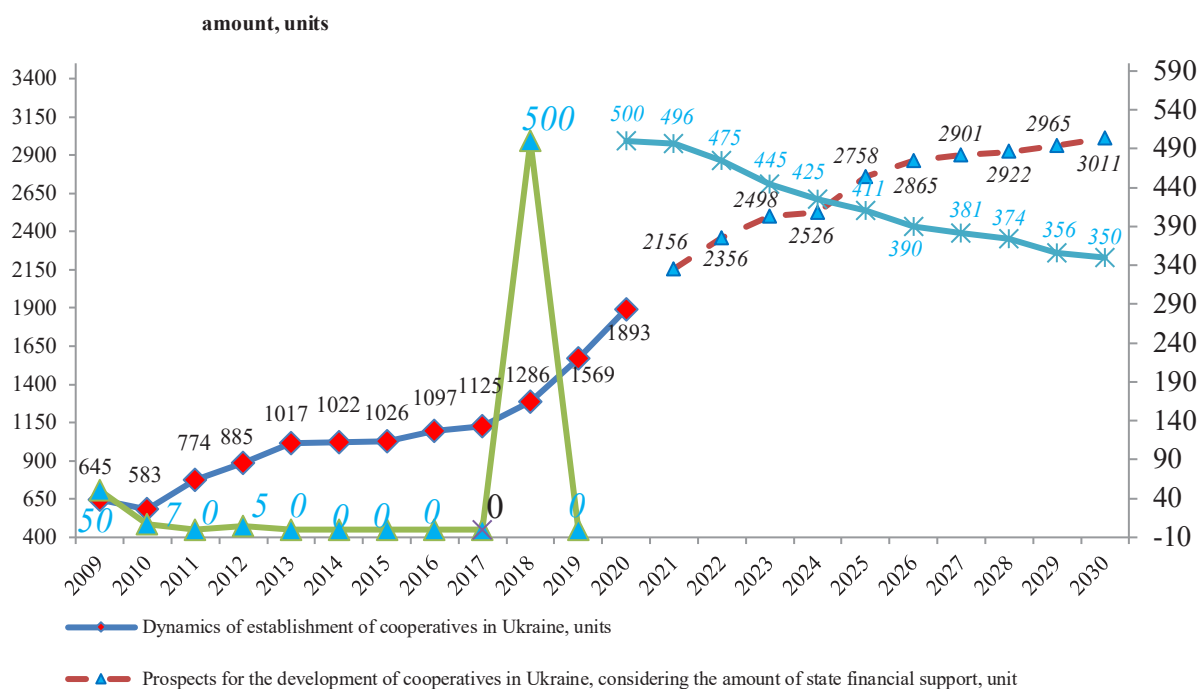


Figure 7. Dynamics of development of agricultural cooperatives at the appropriate level of state funding for the period up to 2030

Source: calculated using data from the Ministry of Agrarian Policy, the State Statistics Service of Ukraine, Food of Ukraine, and materials of the concept of development of farms and agricultural cooperation for 2018-2020 [29; 1; 31]

At the same time, the necessary amount of financial resources (from UAH 200 thousand to 2.5 million) and the average number of members (30-150 people) for creating a cooperative are taken into account. When constructing a forecast of changes in the number of agricultural cooperatives for 2030 using trend analysis, a possible annual increase in the number of agricultural cooperatives within 150 units was established. Based on the calculations made, the annual growth of the number of agricultural cooperatives is projected within 150 units.

In the process of strategic planning, it is established that for the development of agricultural cooperation, it is necessary to implement the following measures: to carry out state support for small forms of management through agricultural cooperatives; to activate the development and functioning of dairy procurement cooperatives with the participation of small enterprises (for packaging or processing dairy products) and using direct communication from the farm to the consumer; to increase by 20% in food markets the number of jobs for the sale of agricultural products and provide laboratory analysis of the quality (safety) of products, technical and technological service; to ensure by 2030 up to 5% growth in the share of products for sale from agricultural cooperatives; activate through existing cooperatives state support in the construction of retail and wholesale markets; conduct state support for the creation of cooperative mini machine-tractor stations at the rate

of at least 1 cooperative machine-tractor station in each amalgamated community; by the end of 2030, to increase the volume of sales of products without the involvement of intermediary business entities to 40% in crop production and to 30% in livestock production through the expansion of wholesale and retail markets and the network of agricultural cooperatives; to create 9-10 multifunctional cooperatives in each amalgamated community by 2030 using direct communication between the cooperative and branches in the villages [31].

Cooperation is a logical stage of further economic development, which became possible with the emergence of business entities with common socio-economic interests in a market environment. This provides an additional opportunity to activate the development and functioning of integration-type organisational structures built "from bottom to top": on the principles of material interest, the implementation of economic choice opportunities to ensure rural development. In 2019, out of 1,207 agricultural cooperatives in Ukraine, 735 operating cooperatives carry out economic activities. As of 01/01 of the corresponding year, agricultural cooperatives for land cultivation, dairy, fruit and vegetable, meat, grain and others were active in the areas of activity in 2015-2019. In 2019, the most active cooperatives were dairy (186 units), land cultivation (162 units), other cooperatives (198 units), fruit and vegetable (115 units), grain (41 units), meat (35 units) cooperatives (Figs. 8-9; Table 2).

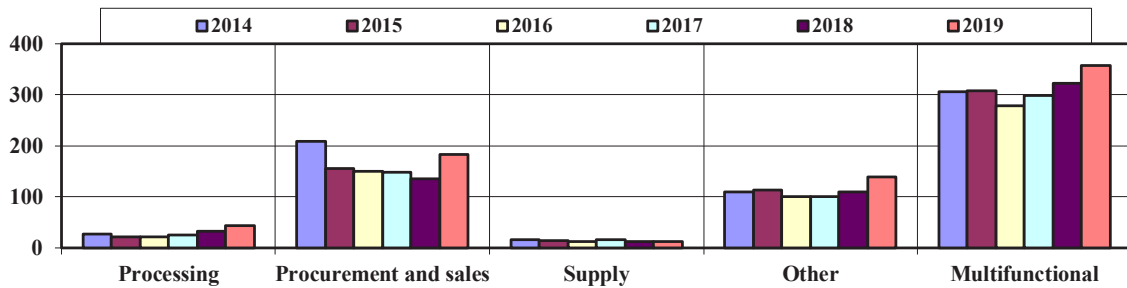


Figure 8. Number of operating agricultural cooperatives by type of activity as of 01.01 of 2014-2019

Source: compiled based on [29; 1]

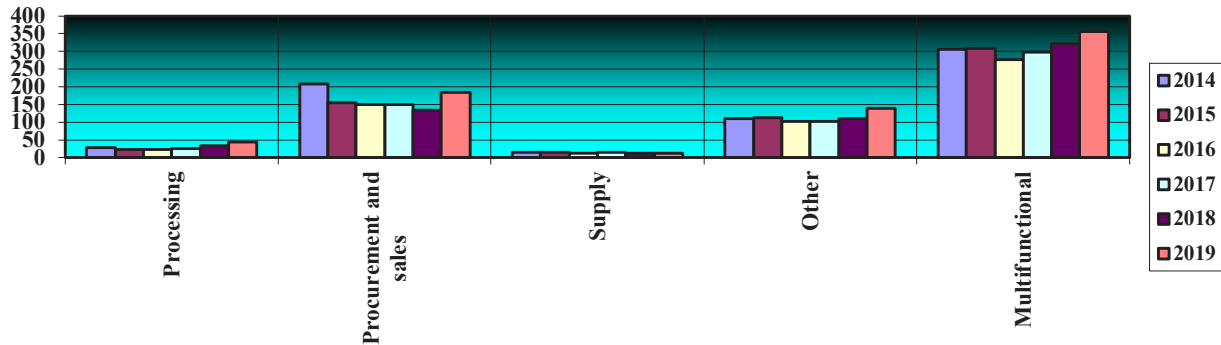


Figure 9. Number of operating agricultural cooperatives by type of activity as of 01.01 of 2014-2019

Source: compiled based on [29; 1]

Table 2. Activities of agricultural cooperatives in Ukraine

Year	Number of cooperatives	Number of cooperative members, persons	Number of employees in agricultural cooperative, persons	Received financial support from the local budget for the year, thsd UAH	Amount of taxes and fees paid, thsd UAH	Size of the mutual fund, thsd UAH	Availability of fixed assets, thsd UAH	Availability of assets at the beginning of the year, thsd UAH	Received funds from the sale of products, thsd UAH
2015	928	29,998	2,401	1,814	21,168.9	41,600.4	114,339	44,789.2	196,238
2016	949	26,515	1,497	1,274.5	16,174.5	36,008.6	77,198.8	37,444.8	87,113.6
2017	1,017	23,520	1,519	995.2	5,952.6	87,627.9	74,939.5	38,563.1	81,694.1
2018	1,073	24,818	1,636	3,438.7	13,981.5	26,263.3	91,449.2	54,498.4	109,624.2
2019	1,207	25,736	1,742	-	14,635.5	28,936.5	91,896.3	54,689.3	122,896.1

Source: compiled based on [29; 1]

Each cooperative provides three or four new jobs. At the same time, cooperatives are economic enterprises that own property in the form of means of production and exchange. In particular, the "Ratay" cooperative (Ternopil Oblast) by type is multifunctional and serving mixed type. The local area is covered. The founders are existing producers. The functioning of various types of cooperatives raises some questions in the system of evaluating processes and results of activities. At the same time, it remains unchanged that they work according to the principles approved by the international cooperative alliance and are present in the legislative acts on cooperation of Ukraine. In different countries, the principles are fundamental rules that characterise cooperatives as specific institutions that differ from other forms of economic activity. Performing social functions and ensuring the effective activities of its members

distinguishes cooperatives from other subjects of agricultural entrepreneurship [8].

In each country, cooperatives as institutions, if there are generally recognised principles, have certain characteristic features related to the translation of individual terms from a foreign language, and traditions and institutional memory regarding cooperative construction.

The goals of functioning of cooperatives are reflected in the system of cooperative principles [5]. The choice of a rational form of management of the organisational and legal structure when developing its organisational and economic mechanism should be preceded by a systematic analysis of the state of development of the industry and rural territory. At the same time, certain requirements should be met – voluntary and economic feasibility of partnership, optimisation of the composition of participants,

organisational unity in determining goals and objectives, equal economic conditions for all. The organisational component of the formation of an integration association includes the coordination council for organising activities and coordinating the interests of participants, conducting marketing research, forming the management apparatus and management services

(accounting, economic, engineering), attracting labour resources, financial resources, and infrastructure. In addition, a service is required for informational presentation, development of statutory documents, business plans, investment, innovation funds, and consumption funds. The mechanism of social capital activation (intangible assets) is also important (Fig. 10).

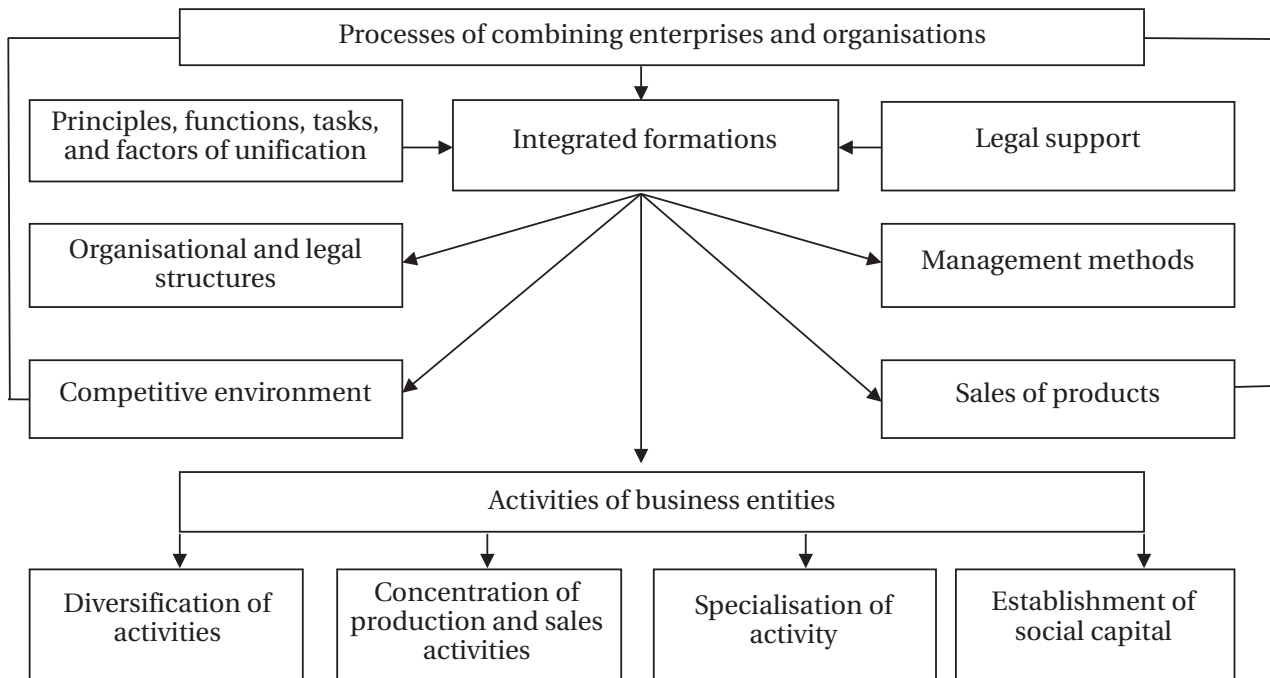


Figure 10: Components of the organisational and economic mechanism of development of cooperation and integration of enterprises and organisations

Source: proposed by the authors based on the systematisation of literary sources [2; 3; 5-8; 15; 16; 19; 31].

The defining component of the organisational and economic mechanism of integrated structures and cooperatives is the establishment of distribution relations – the exchange of intermediate and final results of activities between participants (distribution of income from the sale of products). The task is to ensure compliance with the economic and social interests of partners, to establish parity economic relations. Practically existing variants (forms) of existing integrated associations of the agro-industrial complex can be grouped into the following groups in the areas of relations: procurement of products (storage, transport operations, etc.) through the conditionality of the conditions and procedure for its implementation; providing assistance to producers of products directly without intermediaries in a certain area of integration to improve the quality of products (veterinary medicines, farm detergents, refrigerator maintenance, etc.).

And finally, as one of the most important civilised options, it is a proportional distribution of the final product received by the founder, based on the costs incurred by each participant [2]. The broad aspect of the conceptual vision and coverage of the practices of building an organisational and economic mechanism for integration and cooperation in the agricultural sector, which is associated with the

application of a systematic approach to the study of this phenomenon. This methodological construction is most clearly traced in the best practices of various authors regarding the presentation of methodological provisions for assessing the interaction of various economic factors in the “production-distribution-exchange-consumption” system. In particular, according to A. Potapov [17], the modern model of management in the agricultural sector requires a constant search for ways to organise the effective use of resources – labour, land, and capital [17], that is, strengthening the institutional capabilities of structures to meet the needs of stakeholders competitively. It is advisable to strengthen cooperation and integration processes, because they structurally ensure the achievement of synergy. Accordingly, in methodological terms, it stands on the position of prioritising the approach to improving the organisational and economic mechanism of management in the agricultural sector of Ukraine by expanding cooperation and integration.

More precisely, in terms of improving the quality of such construction, various researchers, with which the authors of this study largely agree, consider the following aspects: the establishment of social capital [18] as an institution for increasing the level of responsibility and trust between the participants

of cooperative and integration structures; the focus of agribusiness on the necessity of transition from a resource-based to a sustainable management model [32], and to achieve this result, a functional organisational and economic mechanism with an orientation towards innovation is needed; the expediency of creating specialised cooperatives [9] for the consolidated representation of the interests of small producers to organise their access to product sales channels; presentation of cooperative structures as an effective mechanism of self-regulation of the market [11], which in aggregate will quantitatively decrease due to the activation of concentration processes, which will be facilitated, among other things, by the mechanism of integration, and strengthening the motivation to cooperate to ensure the sustainable development of rural areas [11], preservation of the village as an environment for life and business, etc.

► Conclusions

In the course of the study, it was found that solving the problems of sustainable development of rural areas and the agricultural sector of the economy requires a systematic approach to the development of integration processes in general and cooperation in particular. The essence of organisational and economic mechanisms of integration and cooperation, the interdependence of the functions of mechanisms of integration associations and cooperatives are substantiated. The organisational and economic mechanism of an integration association should be considered as a structure and as a process. The structure of the mechanism includes components that are necessary for the establishment of an association – legislative acts, resources and facilities, financial support, plans, norms, regulations, contractual and property relations. The organisational and economic mechanism as a process is characterised by the methods and actions used in the organisation of an integrated structure.

Applying a systematic approach to the establishment of new business structures will ensure income, profit, and production volumes. It is proved that the organisational and economic mechanism of functioning should ensure effective interaction of all structures that are part of the integration formation – equivalence of exchange between participants, the

balance of on-farm relations, and growth of economic efficiency of the entire integration system, mutual benefit of partnership relations. It is revealed that the existing sectoral structure of the organisation of the development of agro-industrial production in Ukraine directs it to the development of vertical agro-industrial integration towards the establishment of agricultural holdings. As a result, large agro-industrial associations are formed in rural areas, but rural development remains ignored.

Elimination of monopolisation by agricultural holdings in the land lease market, support for the development of small and medium-sized agribusiness, and measures to increase the competitiveness of agricultural production in the market are required. Their organisational and economic mechanisms can be very diverse, but it remains mandatory to be voluntary for such activities and ensure the mutual benefit of their participation in the integration process. At the same time, all integration levers can work for the final result of production: territorial, technological, economic, technical, managerial, etc.

The study of the organisational and economic mechanism of integration structures revealed: unwillingness of agricultural formations and individual farms to integrate; underestimation of the essence and advantages of the cooperative model of agricultural entrepreneurship against the background of the functioning of agricultural holdings; ineffective political and informational state support for the cooperative idea; lack of systematic training and selection of cooperative leaders, and lack of top-level managers. The task of adopting laws and regulations on the functioning of integrated structures in the agricultural sector of the economy, which would ensure the interest of business entities in creating cooperative integrated associations and optimising the structure of financial support, is becoming urgent. There is no regulatory framework for the functioning of agricultural holdings (which have already been operating for more than ten years – the association of food companies, agricultural producers, and other structures). In order to form an organisational and economic mechanism for the functioning of integration structures, it is necessary to solve the issues of their personnel and financial support, improving distribution relations and state support.

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Побудова організаційно-економічного механізму інтеграції і кооперації в аграрній сфері: системний підхід

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► **Анотація.** Зростання ефективності виробництва в аграрному секторі економіки базується на використанні різних чинників – організаційних, економічних, трудових, матеріальних, мотиваційних та інших. Серед них пріоритетним виступають організаційні та економічні, до яких можна віднести і інтеграційні відносини. Механізм дії організаційних та економічних засад інтеграційних відносин в умовах системного підходу є недостатньо дослідженим, що і визначило тему дослідження. Мета статті – обґрунтувати теоретичні, методичні і практичні засади побудови організаційно-економічного механізму інтегрованих структур з точки зору системного підходу. За методологічну основу дослідження слугували положення інституційної економічної теорії та системний аналіз. Використано монографічний, нормативний, графічний, абстрактно-логічні методи та підходи узагальнення результатів. Визначено економічну сутність організаційно-економічного механізму інтегрованих структур в аграрному секторі економіки. Обґрунтовано сутність інтегрованих структур та інтегративних формувань з точки зору системності. Уточнено поняття «інтегрована структура» і «кооператив». Визначена взаємообумовленість дисфункцій – інтегрована структура і сільськогосподарський кооператив. Результати дослідження можуть бути враховані при розробленні програм: визначення пріоритетів розвитку інтеграційно-кооперативних структур, розробці нормативно-правових актів для формування і розвитку кооперації і інтеграції в аграрній сфері економіки

► **Ключові слова:** сільськогосподарський кооператив, інтеграційно-кооперативні структури, інтеграційні об'єднання, механізм інтегрованих структур, агрохолдинги, суб'єкт підприємницької діяльності, інтегративні формування, кластери