

THE EFFECTIVENESS OF COOPERATIVE FARMING IN LIVESTOCK PRODUCTION IN KAZAKHSTAN

Abstract

The study aims to evaluate the effectiveness of cooperative forms of farming in livestock production in the Republic of Kazakhstan. The analysis is based on official statistical data for 2022–2024, as well as a review of contemporary scientific literature and regulatory documents. The methodological framework includes statistical–economic analysis, comparative assessment, and the examination of qualitative factors influencing cooperative development. The results demonstrate that, despite a slight increase in the number of agricultural cooperatives and their output in recent years, the overall level of cooperation in Kazakhstan remains extremely low — only about 2% of farms participate in cooperatives. The contribution of cooperatives to total livestock production is also limited, accounting for approximately 1–2% of national output. The purpose of the article is to conduct a comprehensive assessment of the current state and efficiency of agricultural cooperation in the livestock sector of Kazakhstan, identify key barriers to its development, and substantiate the role of digital technologies in increasing the productivity of cooperative farming models to develop recommendations for improving government support measures. The study identifies key barriers to cooperative development, including low trust among farmers, insufficient awareness of cooperation principles, weak managerial capacity, and high dependence of agribusiness on state subsidies. At the same time, the findings highlight the organisational and economic advantages of cooperation — shared use of resources, reduced production costs, and expanded market access — as well as the growing potential of digital technologies such as electronic microcredit platforms, land-monitoring systems, and online marketplaces. The paper concludes with recommendations to strengthen cooperation in livestock production in Kazakhstan, including improving the effectiveness of state support, providing farmers with training and advisory services, developing rural digital infrastructure, and encouraging cooperatives to adopt innovative and sustainable practices.

Keywords: agricultural cooperation, animal husbandry, efficiency, digitalization, micro-crediting, agricultural economy, Republic of Kazakhstan.

Introduction

The development of animal husbandry in Kazakhstan is key to ensuring the country's food security and sustainable rural development. Almost 40% of Kazakhstan's population lives in rural areas, and the agricultural sector employs a significant share of rural residents. Nevertheless, agriculture's contribution to GDP remains relatively small (about 4-5%), indicating the industry's unrealised potential. Improving the efficiency of livestock production largely depends on consolidating small farms, introducing modern technologies, and optimising supply chains. In this regard, special attention is paid to the development of agricultural cooperation, including the formation of farmers' associations for joint farming, processing, and product sales. World experience shows that agricultural cooperatives enable small producers to access machinery, processing facilities, storage, and sales markets, thereby increasing their productivity and competitiveness [1]. In Europe and North America, almost all farmers are members of one or more cooperatives that operate at all stages of the value chain [2].

In Kazakhstan, the Institute of Agricultural Cooperation began to revive after a long hiatus following the collapse of the Soviet collective farm system. The Law of the Republic of Kazakhstan "On Agricultural Cooperatives" was adopted in 2015, laying the legal basis for the creation of a new type of cooperatives. The state declares its support for the cooperative movement as a tool to improve the efficiency of the agro-industrial complex and the welfare of rural residents. Thus, the Concept of Rural Development, approved in 2023, provides for measures to develop entrepreneurship and agricultural cooperation in rural areas. Combining small farms, according to

the Concept, should allow farmers to reduce the cost of resources (seeds, fertilisers, feed, fuel and lubricants, services), increase production volumes through the joint use of equipment and infrastructure, and ensure stable product sales without intermediaries.

However, despite the government's efforts, the spread of cooperative forms of management in Kazakhstan's agriculture remains limited. According to the Bureau of National Statistics, at the end of 2023, there were about 3,900 agricultural cooperatives in the republic, which united about 40,000 farmers. For comparison, the total number of registered farms exceeds 1.9 million, meaning that only about 2% of rural producers are members of cooperatives. In developed countries, this indicator reaches 90% or higher. This situation indicates the persistence of serious organisational and economic problems that hinder the development of cooperation in Kazakhstan's agricultural sector.

Against this background, the scientific problem of the present study is the lack of a comprehensive, empirically supported assessment of the effectiveness of cooperative forms of farming in Kazakhstan's livestock sector under current institutional and digital transformation conditions. Existing publications mainly describe the general state of agricultural cooperation or its legal and organisational aspects, but do not provide a focused analysis of effectiveness indicators in animal husbandry or of the factors that determine the contribution of cooperatives to rural development.

The purpose of the study is to assess the effectiveness of cooperative forms of livestock production in Kazakhstan, identify current trends, problems, and prospects for the development of agricultural cooperation, and determine the potential of introducing digital technologies to strengthen cooperative processes. Efficiency in this context refers to the ability of cooperatives to increase productivity and income of participants, increase the competitiveness of livestock products and the sector's contribution to sustainable rural development. The scientific novelty of the article lies in combining up-to-date statistical data for 2022–2024 with an analysis of institutional conditions and digitalisation initiatives to evaluate the fundamental role and potential of cooperatives in livestock production. In developing the multi-valued concept of effectiveness, it is necessary to emphasise the need to include qualitative characteristics of environmental information, such as relevance, reliability, clarity, comparability, balance and integrity [3].

Materials and methods of research

The research is based on general scientific methods of analysis and synthesis, as well as on a statistical and economic approach. The collection and analysis of secondary data of official statistics of the Republic of Kazakhstan – data from the Bureau of National Statistics (BNS) and reports of the Ministry of Agriculture of the Republic of Kazakhstan – for 2022-2024 was carried out. In particular, indicators on the number of agricultural cooperatives, their members and employees, the volume of livestock production in the cooperative sector, and the dynamics of these indicators over recent years are considered. To assess trends, growth rates are calculated (e.g., increases in the number of cooperatives and output in 2023 compared to 2022).

The research procedure includes several stages. At the first stage, data collection and systematisation were carried out: official statistics were grouped by year, type of cooperative, and region, and additional information was obtained from analytical materials and departmental reports. At the second stage, descriptive statistical analysis was applied to identify the structure and dynamics of cooperative development, including the calculation of growth rates, average values, and proportional ratios (e.g., the share of cooperatives and their livestock in total agricultural indicators). At the third stage, comparative analysis was used: the indicators of Kazakhstan were compared over time and, where possible, with benchmark values from countries with more developed cooperative sectors. At the fourth stage, the results were interpreted in light of the study's aim – assessing the effectiveness of collaborative forms of farming in livestock production.

The analytical logic is based on linking quantitative indicators with qualitative characteristics of cooperative development. The effectiveness of collaborative forms of farming in animal husbandry is assessed through a set of indicators, including the number and structure of cooperatives, average membership and employment, the volume and share of cooperative livestock production, and the regional distribution of cooperatives. These quantitative data are interpreted in the context of institutional and organisational conditions.

Previous studies also inform the methodological basis of agricultural cooperation. For instance, Lilimberg S. I., in his research, emphasises that “the object of modelling was an existing agricultural enterprise, based on which it is planned to create an agricultural cooperative by joining it to the farms of the population located on the territory of the enterprise” [4]. This provision reflects the practical orientation of cooperative formation, focused on integrating small forms of management into a single production and economic system. As noted in the dissertation research, the development of agricultural cooperation contributes to improving marketing and processing systems and expanding small farms' access to financial resources and innovative technologies, which is especially important for Kazakhstan's agricultural sector.

Based on the analysis of S. M. Yessengalieva's article “Organisational and economic aspects of the development of agricultural cooperation”, it can be concluded that the effectiveness of cooperative forms of farming in animal husbandry in Kazakhstan is due to their ability to integrate farm and personal subsidiary farms into a single production and economic system [5]. This combination ensures more efficient resource use, lower transaction costs, and the development of processing capabilities and the formation of sustainable sales channels for products. As the author emphasises, agricultural cooperation is a key organisational and economic mechanism for improving the competitiveness of the farm sector and for sustainable rural development.

Based on the analysis of the article *"Agricultural cooperation in the Republic of Kazakhstan: problems and ways to solve them"* by G. A. Kaliev and G. U. Akimbekova. The effectiveness of cooperative forms of management in animal husbandry in Kazakhstan is determined by their role in consolidating small- and medium-sized agricultural producers for the joint organisation of production, processing, and product sales. As the authors note, *"combining small and medium-sized farms for joint organisation of production, storage, processing and marketing of manufactured products helps to reduce costs and develop rural infrastructure"*.

Kaliev and Akimbekova emphasise that the development of agricultural cooperatives is one of the priorities of the state agrarian policy, aimed at "strengthening cooperation in the system of production, marketing, processing of agricultural products, logistics, service and information and marketing services for agricultural producers."

In the context of animal husbandry, cooperative associations contribute to increasing employment and incomes of the rural population, creating new jobs and expanding processing capacities. The authors emphasise that *"the creation of agricultural cooperatives in the areas of production, marketing, processing of agricultural products, material and technical support and servicing of agricultural producers will increase employment and income of the rural population"*.

In addition to quantitative analysis, a qualitative study of the current state of agricultural cooperation was conducted based on a review of the literature (2020-2024) on the agrarian economy, cooperation, sustainable rural development, and the digitalisation of the agro-industrial complex. Scientific articles from international databases (Scopus, ScienceDirect, Google Scholar), reports from international organisations (OECD, FAO), and analytical materials were used. This enabled the identification of key factors affecting the efficiency of agricultural cooperatives (organisational and managerial, financial and economic, and social) and the comparison of Kazakhstan's experience with global trends.

A comparative method was used: indicators of cooperation development in Kazakhstan were correlated with data for developed countries (the share of cooperative farmers, the level of

involvement in cooperatives, etc.) to identify the gap and potential growth reserves. The cooperative, as an organisational and legal form, is the best and, at the same time, the oldest example of cooperation between entities in the agri-food sector [6]. Also, a regional analysis was conducted within the country – a comparison of the number and dynamics of agricultural cooperatives in the regions of Kazakhstan, to note territorial imbalances. To assess the impact of cooperatives on industry outcomes, the cooperative sector's share of total livestock production is used as a proxy.

A regional analysis was conducted within the country, comparing the number and dynamics of agricultural cooperatives across Kazakhstan's regions to identify territorial imbalances. To assess the impact of cooperatives on industry outcomes, the cooperative sector's share of total livestock production is used as a proxy. Special attention is paid to the role of digital technologies and state initiatives in the digitalisation of the agricultural industry (creation of electronic platforms and information systems for farmers), which are analysed as potential tools for reducing transaction costs and improving coordination within cooperative structures.

Results and their discussion

The analysis of statistics showed a positive trend in the quantitative indicators of cooperation in recent years. Thus, according to the National Tax Service, 3,284 agricultural cooperatives operated in Kazakhstan in 2022, and in 2023 their number increased to 3,911 [7]. This means a 19% increase over the year, indicating the activation of cooperation processes in rural areas. The increase in the number of cooperatives was facilitated by the launch in 2023 of the state program to increase rural incomes, "Auyl Amanaty", which stimulated their creation through preferential microcredit. In particular, during the program's implementation, more than 400 new agricultural cooperatives were created, of which 321 received financing totalling 6.7 billion tenge.

Table 1 - Dynamics of agricultural cooperatives in Kazakhstan (2022-2024)

Indicator	2022 year	2023 year	2024*	Growth rate 2024/2022, %
Total number of agricultural cooperatives, units	3 284	3 911	4 268	+30,0
Of these, livestock units.	1 220	1 560	1 790	+46,7
Average number of members of one cooperative, per	12,3	13,8	14,5	+17,9
Total number of employees of cooperatives, persons	7 380	7 490	7 860	+6,5
Volume of output (in actual prices), billion tenge	52,0	67,8	79,4	+52,7
Including livestock products, billion tenge	35,0	45,5	53,8	+53,7
Average production volume per 1 cooperative, million tenge	15,8	17,3	18,6	+17,7

Note: data for 2024 is an estimate as of the third quarter of 2024, based on reports from the Ministry of Agriculture of the Republic of Kazakhstan. stat.gov.kz.

However, despite the growth in the number of organisations, the average scale of cooperatives remains small. The total number of employees of agricultural cooperatives nationwide was 7.38 thousand in 2022 and increased only slightly to 7.49 thousand in 2023. For a single cooperative, this is fewer than 2 full-time employees on average. This situation is explained by the fact that many cooperatives are relatively small associations of farmers, where the members themselves perform the main work, and the hired administrative and managerial staff is minimal. For example, in 2021, there were 3,147 cooperatives with 7.53 thousand employees; in 2022, a reduction in staff per cooperative was also observed. This may indicate both increased operational efficiency (staff optimisation) and the presence of formally established cooperatives without active economic activity, as well as expanded labour resources.

From the standpoint of the stated aim – evaluating the effectiveness of cooperative forms of farming in livestock production – these results show that the institutional framework and state support mechanisms have led to quantitative expansion of the cooperative sector, but not yet to a significant increase in its economic weight. The relatively small average size of cooperatives and

limited employment suggest that many associations are still at an early stage of development and have not realised economies of scale.

The regional section shows a significant heterogeneity in the development of cooperation. Most agricultural cooperatives are concentrated in the southern and western agricultural -oriented regions. The leader is the Turkestan region – in 2022, 794 cooperatives operated there; the Zhambyl region is second (363), followed by the West Kazakhstan region (270). For comparison, in the cities of national significance – Nur-Sultan (Astana and Almaty-the number of cooperatives was measured in units (8 and 7, respectively, in 2022). In small, less developed regions, the cooperative movement is also poorly represented (for example, in the Atyrau region, there were only 19 cooperatives in 2021 and 29 in 2022). This disparity reflects differences in the regional sectoral structures and in the population's involvement in agriculture. Where the rural population is large and small-scale production is developed (South, Kazakhstan, small-scale mill, etc.), cooperatives are formed more actively. In contrast, in the industrial-raw-material regions, they are practically absent.

Table 2- Regional structure and dynamics of agricultural cooperatives in Kazakhstan (2021-2023)

Region	Cooperative Region (2021)	Cooperatives (2022)	Cooperatives (2023)	Growth rate 2023/2021, %
Turkestan region	710	794	860	21.1
Zhambyl region	340	363	405	19.1
West Kazakhstan region	250	270	295	18.0
Atyrau region	19	24	29	52.6
Almaty region	110	118	126	14.5
Nur-Sultan (Astana)	6	8	9	50.0
Almaty	6	7	8	33.3

Note: dairynews.today,ijirss.com, stat. Gov. kz. Author's calculations.

The regional analysis indicates that the potential for cooperation is unevenly used. In some regions, cooperatives may serve as a real instrument for integrating small producers and forming local value chains, whereas in others their presence is mostly nominal. From an effectiveness perspective, this means the contribution of cooperatives to livestock development is likely to be higher in regions with a critical mass of active associations and supporting infrastructure.

In general, the cooperative sector's contribution to agricultural production has increased in recent years, though it remains relatively small. According to the Ministry of Agriculture, in 2023, agricultural cooperatives produced about 1.2 million tons of agricultural products, valued at 67.8 billion tenge. This is a 30% increase compared to the same indicator in 2022, which indicates an accelerated increase in output in the cooperative sector. The growth was mainly driven by an increase in production in crop cooperatives: out of the total volume of 1.2 million tons, about 1,053. Six thousand tons accounted for crop production (grain, fodder crops, etc.). However, the share of livestock in cooperative production is also significant – 187.3 thousand tons in 2023, or about 15% of the total volume of products cooperatives, totalling 45.5 billion tenge [8]. For comparison, in 2022, cooperatives produced about 144 thousand tons of livestock products (estimated), i.e., an increase of about 30% in physical terms.

Meat and milk occupy the main place in the structure of livestock products of cooperatives. For example, agricultural cooperatives sold 110 tons of honey, as well as several tens of thousands of tons of grain and feed, only in terms of officially realised volumes in 2022, indicating diversification of their activities; however, the bulk of value falls on the meat and dairy sector. The share of cooperatives in the national production of the main livestock products remains small. If we compare the number of livestock held in cooperatives with the total number, we find that the cooperative sector accounts for only about 1.5–2% of animals. So, at the beginning of 2023, there

were about 145.6 thousand heads of cattle in agricultural cooperatives (including ~79 thousand cows) [8]. While the total number of cattle across all farm categories in the country exceeded 9 million, more than half are kept on private subsidiary farms owned by the population. Consequently, cooperatives account for only a small share of livestock resources. Similarly, it is estimated that their contribution to gross milk and meat production is measured in several percentages. For example, the total milk yield of all farms in Kazakhstan is about 6 million tons per year, while cooperatives produce less than 200 thousand tons (including live-weight meat).

Thus, in quantitative terms, the cooperative sector of Kazakhstan shows growth and positive dynamics: the number of cooperatives and the volume of their products are increasing, and this progress is especially noticeable in 2023. State programs (such as "Auyl Amanaty") gave impetus to the creation of new cooperatives and to the growth of their production. However, the effectiveness of cooperative forms of management has not yet been fully realized, as evidenced by their low share in the agricultural economy. Most small farmers and individual farms continue to operate individually, outside of cooperatives. The next section examines the reasons for producers' limited involvement in cooperatives and the problems that undermine the effectiveness of existing cooperative forms.

Table 3- Production volumes of agricultural cooperatives in Kazakhstan (2022-2023)

Indicator	2022 year	2023 year	Change, %	Source
Total output, million tons	0.92	1.20	+ 30.4	gov.kz
Value of manufactured goods, billion tenge	52.0	67.8	+30.4	gov.kz
gov.kz Crop production, thousand tons	776,0	1 053,6	+35,8	gov.kz
Livestock products, thousand tons	144.0	187.3	+ 30.0	gov.kz
Share of animal husbandry in the total volume, %	15.7	15.6	-0.1 p. p.	author's calculation

Source: [dairynews. today,ijirss.com](http://dairynews.today,ijirss.com), stat. Gov. kz. Author's calculations.

Table 4 - Structure of cooperative production in agriculture (2023)

Product type Production	volume, thousand tons	Share in cooperative output, %	Value, billion tenge	Comment
Crop production (grain, feed, etc.)	1 053.6	85.0	22.3	Basis of growth due to exports and subsidies
Livestock products (meat, milk)	187.3	15.0	45.5	High value added
Honey, by-products	0.11	<1	0.05	Sales through private farms and small associations
Total	1 240,9	100,0	67,8	—

Source: [dairynews. today,ijirss.com](http://dairynews.today,ijirss.com), stat. Gov. kz. Author's calculations

Livestock production accounts for 15% of cooperatives' total output, but in value terms, it accounts for about two-thirds of revenue. This is due to higher meat and dairy prices and cooperatives' focus on processing and the local market. Thus, although crop production dominates in terms of physical volume, livestock-related activities are more important for cooperatives' financial performance, confirming the relevance of focusing on animal husbandry when evaluating their effectiveness.

Cooperatives cover only 1.5-2% of the total livestock population and produce up to 3% of the main types of livestock products. At the same time, their share in value terms is higher due to their concentration on more profitable segments (meat, milk, processing). The data confirm that the cooperative sector is at an early stage of development, but shows growth potential.

Despite the obvious advantages of joint farming, agricultural cooperation in Kazakhstan has not yet taken its proper place in the structure of agricultural production. Several key factors hindering the widespread use of effective cooperatives have been identified.

Table 5- Participation of cooperatives in production and livestock (as of the beginning of 2023)

Indicator	Cooperatives	All farms of the Republic of Kazakhstan	Share of cooperatives, %	Source
Number of cattle, thousand heads	145.6	9,000	1.6	ijirss.com; stat.gov.kz
Of them cows, thousand heads	79,0	4,700	1,7	ijirss.com
Milk production, thousand tons	200	6 000	3.3	estimated
meat production (live weight), thousand tons	187	1 100	1.7	gov.kz
gov.kz Honey production, t	110	7 800	1,4	dairynews.today
Source: dairynews.today , ijirss.com , stat. Gov. kz. Author's calculations				

First, there is a historical lack of confidence in the cooperative model among the rural population, rooted in the negative experiences of Soviet collective farms and forced collectivisation. This is manifested in farmers' psychological unwillingness to pool resources and conduct common business, and in fears of losing their independence. Secondly, state support for the agricultural sector, provided in significant volumes, paradoxically reduced the incentives for cooperation. Analysts note that "comprehensive state support has replaced market mechanisms" in Kazakhstan's agriculture. Farmers are used to relying on direct subsidies, soft loans, write-offs and assistance in difficult situations, so they do not seek to unite to increase competitiveness. After all, the state already supports even inefficient producers. In the presence of easy money from the state, the need for cooperation to save costs and jointly overcome market risks is perceived as unobvious. As a result, many farms lack economic incentives to join cooperatives and increase labor productivity.

Another reason is the lack of awareness and competence of rural entrepreneurs in establishing and maintaining cooperatives. The lack of basic knowledge of the principles of cooperation, how to properly organise the association's work, keep records, distribute income, and assign responsibilities leads to the fact that even established cooperatives do not always function effectively. The OECD noted that Kazakhstan needs educational programs for farmers on cooperation, clarification of the benefits of participation, and legal and advisory support at the initial stage of forming cooperatives. For example, in Poland there is a well-developed infrastructure of agricultural consulting centres. Currently, such work is not carried out actively enough. For example, there is no universal system for training cooperative managers, standard samples of cooperative business plans, or other methodological materials that could make it easier for cooperative organisers to address managerial and legal issues [9]. International experience shows that professional management, transparency, and management's accountability to members are critical to the success of cooperatives. In Kazakhstan, many cooperatives were created "for show" to receive one-time grants or benefits, without a well-thought-out business model or trained management. As a result, such cooperatives are often unsustainable.

An important limitation is the underdeveloped marketing and processing infrastructure, especially for livestock products. Small breeders face difficulties when trying to enter large markets: it is not profitable for them to transport small batches of milk or meat to remote processing plants; meeting standardisation and safety requirements is difficult; and there is no local cooling equipment or logistics. Cooperatives should ideally address these issues by organizing bulk batches of products and ensuring their primary processing. However, in practice, many established

cooperatives have not acquired the necessary material and technical bases – milk collection points, slaughterhouses, cooling depots, etc.- due to insufficient investment or support. Without modern infrastructure, cooperatives cannot significantly improve production efficiency and remain mainly at the level of collective product collection.

Another problem is the lack of vertical integration and the weak links between cooperatives, processors, and retail chains. Ideally, cooperatives could take on marketing functions by entering into contracts with processing plants, wholesale buyers, and exporters, thereby providing their members with guaranteed sales at favourable prices. In Kazakhstan, cooperatives often lack sufficient production capacity and the competencies to negotiate on an equal footing with large processors. As a result, some established cooperatives are limited to serving as intermediaries in the sale of farm products, without achieving a significant increase in the selling price for their members.

Evaluating the effectiveness of cooperatives. If we consider the economic efficiency of existing cooperative forms, it is not yet obvious for most farmers. The key expected effects of cooperation – cost reduction due to wholesale purchases and joint use of equipment, increased revenue due to entering new markets and improving product quality-are shown on a point-by-point basis. According to the analysis, in regions with the largest number of cooperatives (for example, the Zhambyl region), there is still no significant outstripping of the standard of living of the rural population compared with regions with few cooperatives [10]. A study by Zhenskhan D. et al. (2025) showed that the link between the development of cooperatives and the quality of life in rural areas remains weak in most regions, except in those already large producers of agricultural products. In other words, cooperatives themselves have not yet become a driver of rural development, and their influence is evident only where the agricultural sector is already sufficiently developed. This indicates that the current cooperatives are not fully fulfilling their mission of transforming the rural economy. Often they are small in number, have limited turnover, and cannot significantly increase their members' income compared with individual management.

Nevertheless, at the micro level, there are successful examples of properly organised cooperation that have tangible effects. If a cooperative operates "according to business rules – - it has a clear charter, business plan, qualified management, and internal control system-it can reduce costs for its members and increase their revenue. For example, livestock fattening or dairy cooperatives that have gained access to refrigeration equipment have been able to make direct deliveries to processing plants, bypassing resellers, thereby increasing farmers' product prices. Also, cooperative associations, in some cases, facilitate farmers' access to finance: joint commitment increases banks' and microfinance organisations' confidence, and loans become more accessible when collective guarantees are in place. According to research, membership in a cooperative can significantly improve household sustainability – in particular, by improving families' food security through programs that subsidise costs and sell products through the cooperative. These individual positive cases show the potential direction for scaling up effective cooperative practices in the livestock sector.

Conclusion

The study showed that cooperative forms of management in animal husbandry in Kazakhstan are at an early stage of development and have not yet achieved high efficiency, but they are showing positive changes. The number of agricultural cooperatives and the volume of their products are growing steadily, with a particularly noticeable increase in 2023 due to the state program of support for rural cooperatives. Nevertheless, the level of coverage of farmers by cooperatives remains extremely low – about 2% of farms, while in developed agricultural economies almost all producers are co-operated. The contribution of the cooperative sector to total livestock production is also small (estimated at no more than a few percent). This indicates that the potential of cooperation is not fully realized.

The analysis of statistical indicators and institutional conditions has enabled the identification of the main problems impeding the effective operation of cooperatives. These problems are related to the institutional environment and the human factor. The excessive reliance of the agricultural business on state subsidies has reduced farmers' motivation to self-organise. The lack of knowledge about cooperation, the lack of qualified managers, and the villagers' distrust of collective forms of farming also significantly limit the development of the cooperative movement. In addition, the weak material and technical base of many cooperatives, along with their limited financial resources, do not significantly increase participants' productivity and profitability. At the same time, research and international experience confirm that, when properly organised, cooperatives can significantly enhance the sustainability and efficiency of small farmers. In the context of Kazakhstan, agricultural cooperatives can become a key link that unites private subsidiary farms and farms to jointly address the accumulated problems of animal husbandry – marketing products, access to technology, loans, and knowledge. Digitalization will play a special role in the future: modern IT solutions can eliminate many barriers to communication and coordination of farmers. Digital platforms and tools are already being used to simplify the receipt of loans and subsidies by cooperatives, to monitor products, and to search for sales markets. Their further development will help cooperatives operate more transparently, efficiently and on a larger scale.

To enhance the effectiveness of cooperative forms of farming in Kazakhstan's livestock sector, it is advisable to focus on the following measures:

- Improving state support – shifting the focus from direct one-time subsidies to creating a favorable environment for cooperation. This includes tax incentives for cooperatives that function successfully, sales support (for example, quotas or preferences for cooperative products in public procurement), and co-financing of infrastructure projects (construction of milk collection points, feedlots, etc.).

- Education and awareness – launching special programs to teach farmers the basics of cooperation and agribusiness, conducting awareness-raising activities in rural areas about the benefits of cooperatives. In each district, you should either set up consulting centres or attract successful co-operators to serve as mentors.

- Strengthening the management of cooperatives – development of training institutions for managers of personnel for agricultural cooperatives, introduction of standard standards of cooperative farming (sample business plans, charters, reports). The State and cooperative unions should establish a system of auditing and rating cooperatives to encourage their effectiveness and responsibility to their members.

- Digitalization of the rural economy – continue to develop the Internet infrastructure in rural areas (including providing broadband access, as planned under the DARE project), so that every cooperative and farmer has the opportunity to use online services. Support the creation of national digital platforms for trade in agricultural products that unite producers in virtual cooperatives for joint market entry.

- Integrating sustainable development – encourage cooperatives to adopt sustainable agricultural practices (organic farming, careful use of pastures, climate-resilient technologies), which can open them up to niche markets and additional investments (for example, from green technology funds).

In conclusion, it should be emphasised that agricultural cooperation in animal husbandry in Kazakhstan has significant unrealised potential. Solving the identified problems and implementing the proposed measures will allow cooperatives to transform from formal associations into effective business structures that can increase production efficiency, improve the well-being of the rural population and make a significant contribution to food security and sustainable development of the country. Further research should consider the effectiveness of cooperatives not only in terms of participants' productivity and income, but also in their contribution to environmental

sustainability. Further research can focus on in-depth analysis of the economic performance of specific cooperatives, the development of a model of optimal cooperation that takes into account Kazakhstan's specifics, and the monitoring of the impact of digital innovations on the transformation of rural cooperative systems.

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ЭФФЕКТИВНОСТЬ КООПЕРАТИВНОГО ВЕДЕНИЯ ХОЗЯЙСТВА В ЖИВОТНОВОДСТВЕ КАЗАХСТАНА

Аннотация

В статье проводится оценка эффективности кооперативных форм хозяйствования в животноводстве Республики Казахстан на основе анализа официальных статистических данных за 2022–2024 годы и обобщения результатов современных научных исследований. Установлено, что, несмотря на принятие Закона Республики Казахстан «О сельскохозяйственной кооперации» в 2015 году, уровень кооперации в аграрном секторе остаётся низким: в состав сельскохозяйственных кооперативов входит лишь около 2% хозяйств. Вместе с тем выявлены положительные тенденции, выражающиеся в увеличении числа сельскохозяйственных кооперативов с 3 284 в 2022 году до 3 911 в 2023 году, а также в росте объёмов продукции, произведённой кооперативами, на 30% в 2023 году. Несмотря на это, вклад кооперативов в общий объём продукции животноводства по-прежнему незначителен и составляет порядка 1–2%. Сдерживающими факторами развития кооперации определены низкий уровень доверия среди фермеров, недостаточная

информированность о преимуществах кооперативной модели, а также высокая зависимость аграрного бизнеса от государственных субсидий.

Цель статьи — провести комплексную оценку современного состояния и эффективности сельскохозяйственной кооперации в животноводстве Казахстана, выявить ключевые барьеры её развития и обосновать роль цифровых технологий в повышении продуктивности кооперативных форм хозяйствования для разработки рекомендаций по совершенствованию мер государственной поддержки. В работе рассматриваются организационно-экономические преимущества кооперации, включая совместное использование ресурсов, снижение производственных издержек и расширение каналов сбыта, а также анализируется потенциал цифровизации аграрного сектора. Показано, что внедрение цифровых технологий и платформ, таких как электронные системы микрокредитования, инструменты мониторинга земельных ресурсов и аграрные маркетплейсы, способствует повышению эффективности деятельности кооперативов за счёт упрощения доступа к финансовым ресурсам, знаниям и рынкам сбыта.

В заключении сформулированы рекомендации по развитию сельскохозяйственной кооперации в животноводстве Казахстана, направленные на совершенствование мер государственной поддержки с акцентом на формирование благоприятной институциональной среды, повышение уровня кооперативной грамотности фермеров, развитие цифровой инфраструктуры в сельской местности и стимулирование внедрения устойчивых и инновационных практик.

Ключевые слова: сельскохозяйственная кооперация, животноводство, эффективность, цифровизация, микрокредитование, аграрная экономика, Республика Казахстан.

ҚАЗАҚСТАНДАҒЫ МАЛ ШАРУАШЫЛЫҒЫНДАҒЫ КООПЕРАТИВТІ ШАРУА ЖҮРГІЗУДІҢ ТИІМДІЛІГІ

Андатпа

Мақалада Қазақстан Республикасының мал шаруашылығындағы кооперативтік шаруашылық жүргізу нысандарының тиімділігі 2022–2024 жылдар аралығындағы статистикалық деректер мен қазіргі ғылыми зерттеулерді талдау негізінде бағаланады. 2015 жылы ауыл шаруашылығы кооперациясы туралы заң қабылданғанына қарамастан, Қазақстанның аграрлық секторындағы кооперация деңгейі әлі де төмен – ауыл шаруашылығы кооперативтерінің құрамына тек шамамен 2% шаруашылықтар ғана кіреді. Ауыл шаруашылығы кооперативтерінің саны 2022 жылы 3 284-тен 2023 жылы 3 911-ге дейін өсуі, кооперативтер өндіретін өнім көлемі 2023 жылы 30%-ға артуы оң үрдістер ретінде анықталады. Алайда кооперативтердің жалпы мал шаруашылығы өніміндегі үлесі әлі де мардымсыз (1–2% шамасында), ал даму процесі фермерлердің сенімінің төмендігімен, кооперация туралы білімнің жеткіліксіздігімен және агробизнесінің мемлекеттік субсидияларға тәуелділігімен тежелуі байқалады. Мақаланың мақсаты — Қазақстанның мал шаруашылығындағы ауыл шаруашылығы кооперациясының қазіргі жай-күйі мен тиімділігіне кешенді бағалау жүргізу, оның дамуындағы негізгі кедергілерді анықтау және мемлекеттік қолдау шараларын жетілдіру бойынша ұсыныстар әзірлеу үшін кооперативтік шаруашылық нысандарының өнімділігін арттырудағы цифрлық технологиялардың рөлін негіздеу болып табылады. Кооперацияның ұйымдастырушылық және экономикалық артықшылықтары (ресурстарды бірлесе пайдалану, шығындарды азайту, өткізу мүмкіндіктерін кеңейту) мен аграрлық секторды цифрландыру әлеуеті қарастырылды. Цифрлық технологиялар мен платформаларды (электрондық микронесиелеу жүйелері, жер мониторингі, маркетплейстер) енгізу қаржыландыруға, білім мен нарықтарға қолжетімділікті жеңілдету арқылы кооперативтердің тиімділігін арттыратыны көрсетілді. Қазақстандағы мал шаруашылығындағы ауыл шаруашылығы кооперациясын нығайту бойынша мемлекеттік қолдау шараларын жетілдіру, фермерлерге кооперация негіздерін үйрету, ауылдық жерлерде цифрлық инфрақұрылымды дамыту және тұрақты әрі инновациялық тәжірибелерді енгізуді ынталандыру жөнінде ұсыныстар жасалады.

Негізгі сөздер: ауыл шаруашылығы кооперациясы, мал шаруашылығы, тиімділік, цифрландыру, микронесиелеу, аграрлық экономика, Қазақстан Республикасы.

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