
RURAL CONSUMER COOPERATIVE AS THE FACTOR OF INCREASE IN EFFICIENCY OF FUNCTIONING OF PRODUCTION SYSTEMS IN AGRARIAN AND INDUSTRIAL COMPLEX

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Summary

In article the analysis of the condition and development of modern production systems of agricultural industry is provided. Process of reforming of agro-industrial complex of the Republic of Kazakhstan caused the necessity of transformation of production systems and their reduction in compliance to structural changes of agricultural production. The changes in production systems of agricultural industry of Kostanay region which happened during development of the market relations are shown in the article; the analysis of volumes of crop production and livestock production in general on area and on categories of farms is given. For the analyzed period the main problems of functioning of production systems, such as monopolization of grain production by spring-sown field; concentration of bigger volume of production of livestock production in farms of the population and as a result, small-scale unorganized production; seasonality of work; violation of the principle of a permanency of fixing of manpower to technical means and objects of production; ignoring of rational, specialized forms of job management; insufficient employment of a rural population in social production. All these found reflection in performance indicators of functioning of production systems and are consequences of lack of evidence-based approach to process of forming of their efficiency. It is proved that rural consumer cooperative has a number of advantages before other forms of conducting agricultural production. Results of economic-mathematical modeling determine its fundamental role in the course of increase in efficiency of functioning of production systems. In the long term enhancement of forms of rural consumer cooperative will promote a gain in productivity of work of subjects of agrarian business, increase in a land equivalent ratio and an employment increase of a rural population and efficiency of development of agro-industrial complex of the Republic of Kazakhstan.

keywords: agrarian industry, production systems, efficiency improvement

Justification of study. For the last 20 years the agro-industrial complex of the Republic of Kazakhstan underwent considerable restructuring that was connected, first of all, with establishment of independence of the state.

The functioning of both agricultural and industrial production based on the regularities of central planning inherent in a command administrative system further became impossible. The market mechanism of managing required the complex measures directed to reforming of agro-industrial complex. Creation of the new legislation which acted as a basis for development of the private-ownership relations became a result of reforming. It led to changes of the production and land relations, cash and credit and bank systems to pricing liberalization and also to forming of the corresponding market infrastructure.

In new conditions there was a need of development of adequate approaches to the organization and conducting production of agricultural products therefore farm policy which was used earlier ceased to be true owing to their bulkiness and impracticability.

The given circumstances entailed need of refining of organizational and economic essence of a production system of agricultural organization that in modern economic conditions acquired special relevance.

Main part.

Production systems in agrarian and industrial complex act as an object of the research.

Object of the research is development of rural consumer cooperative as a factor of increase in efficiency of functioning of

production systems.

Research purpose is reason for a role of rural consumer cooperative in increase in efficiency of functioning of production systems.

Research methods: monographic, method of the analysis and synthesis, economical and statistical and methods of economic-mathematical modeling.

It is known that agricultural organizations have the features which are expressed in functioning of their production system. These features significantly differ from production systems of industrial enterprises and the production organizations of the agrarian sphere. First of all, they are determined by features of the most agrarian production.

The production process which is an element of a production system in agricultural industry performs the support functions providing normal implementation of natural, biological processes in natural objects. In this regard, the production system of agricultural organization can be presented in the form of the scheme (figure 1) [1].

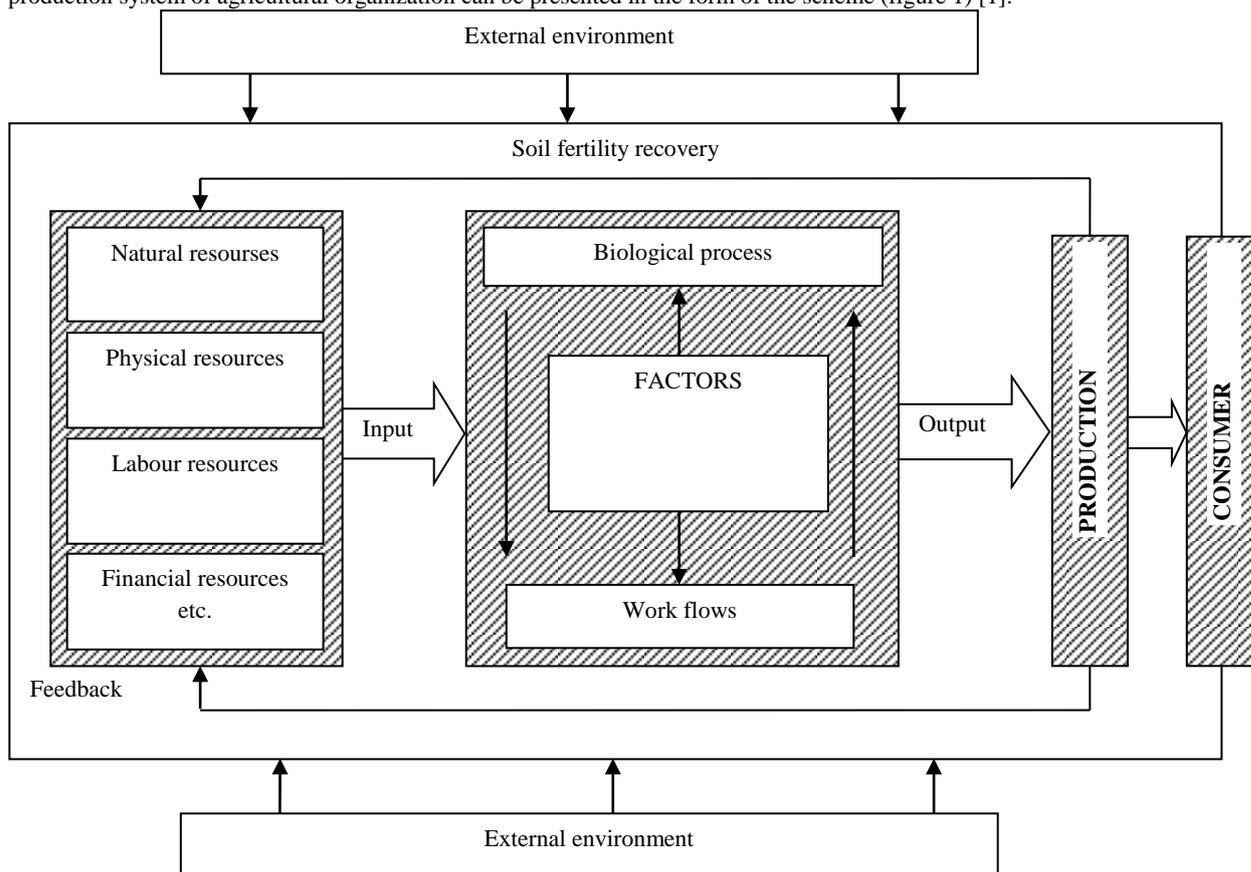


Figure 1 – Complex model of the production system of agricultural organization

In the provided model of the production system "input", in addition to material and a manpower which traditionally joins many authors considers also natural resources as a basis of agricultural production. The biological processes displayed within production process in combination with labor processes will promote a production growth in volumes ensuring reproduction of fertility of the soil and increase in cost efficiency.

Thus, the production system of agricultural organization can be determined as set of the elements allowing to involve the biological and labor processes using numerous natural, material, labor, financial and other resources in strict accordance with laws of the nature providing effective production of products necessary for society and reproduction of productive force of nature [1].

In modern conditions processes of forming and functioning of production systems in agricultural industry are followed by a number of problems which require generalization and systematization. During this research the analysis of the operating conditions of forming and functioning of modern production systems on the example of Kostanay region of the Republic of Kazakhstan (from 2011 to 2015) was made [2].

By results of the research it was revealed that in Kostanay region the main part of production of crop products is concentrated in agricultural enterprises (from 52,4 to 65,3% of total production for the analyzed period). The essential share of gross of crop production (on average in 5 years of 30,5%) is the share of peasant farms (figure 2).

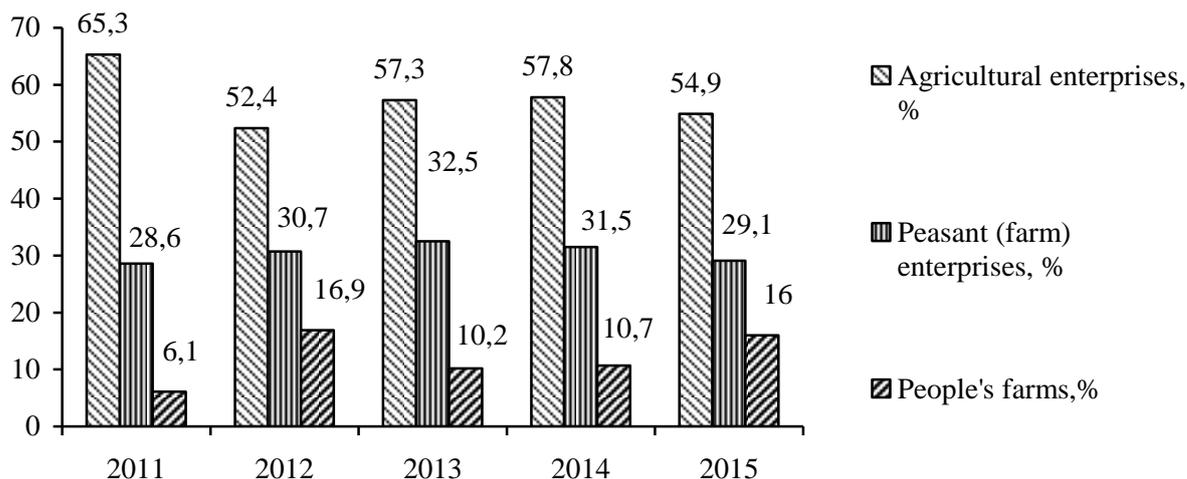


Figure 2 – Structure of production of main types of crop production on categories of farms, %

Generally production of agricultural products is provided by grain crops. The exclusive culture occupying the most part of acreage by all participants of the grain market is spring-sown field.

Characteristic tendency of production of livestock products is its concentration in farms of the population that demonstrates availability of small-scale of this agricultural industry. On average 79, 8% of products of livestock production (figure 3) were made by farms of the people for 2011-2015.

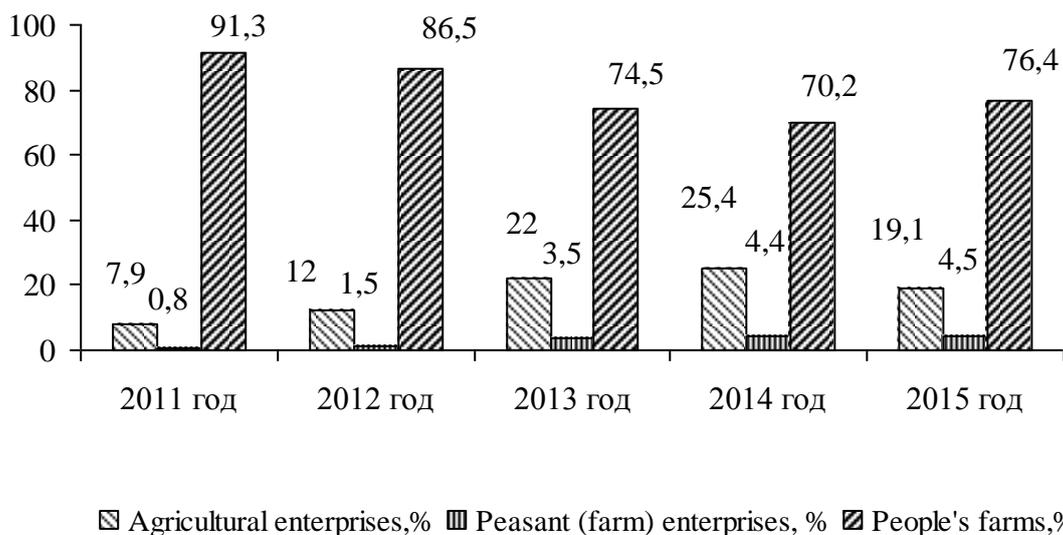


Figure 3 – Structure of production of main types of livestock production on categories of farms, %

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In 2011 the share of production of farms of people was higher and constituted 91,3%. However, by 2015 positive dynamics in structure of production is observed the contribution of agricultural enterprises becomes more considerable.

Decrease in productivity of animals, impossibility of adequate ensuring the growing consumption of livestock products, its high cost value and low competitiveness is a consequence of small-scale of a livestock industry.

It causes deterioration in social and demographic situation in the village, in particular, sufficient employment of a rural population isn't provided. There is an outflow of qualified specialists.

The carried-out analysis allowed systematizing the main problems of forming and functioning of production systems. The group of problems is provided in table 1.

Table 1 – Problems of forming and functioning of production systems of Kostanay region in modern conditions

Group of problem	Content
Organization of production	<ul style="list-style-type: none"> – The rational combination of production system branches of agriculture is violated; – in animal agriculture a small-scale production is prevailing; – labour seasonality; – the principle of the constancy of securing manpower for technical equipment and production facilities is violated; – the use of rational, specialized forms of work organization is ignored; – cooperation is underdeveloped
Technical and technological	<ul style="list-style-type: none"> – In crop growing the farming systems based on extensive use of land became widespread; – the acreage of spring wheat crops is monopolized; – scientifically based crop rotations are violated
Economic	<ul style="list-style-type: none"> – Agricultural output is dictated by the economic interests of land owners and tenants; – high labor intensity and capital intensity of livestock production in public agricultural organizations; – a significant reduction in the volume of agricultural production in some years due to the strong dependence on natural and climatic conditions; – the lack of financial resources for meeting the needs of agricultural producers in credit facilities in full
Labour	<ul style="list-style-type: none"> – The lack of qualified personnel; – low level of personnel qualifications; – high level of self-employed population
Sociodemographic	<ul style="list-style-type: none"> – Rural depopulation; – the lack of rural employment in public production; – aging of the rural population due to migration of young people to the cities; – the real level of wages in rural areas is significantly lower than in other spheres of public production

The above mentioned grouping of problems enables the development of directions of the effective development of agricultural production and confirms the necessity of the creation of a new, scientifically based production system of an agricultural organization based on rational combination of industries [1].

Agricultural production systems constitute the major core factor of the agro industrial complex. In this regard, one of the ways of increasing the efficiency of production systems is their formation not only at the enterprise level, but at a higher level based on the interdisciplinary collaboration. The practice of functioning of the production systems of agricultural enterprises should involve clusters, rural consumer cooperatives and other integration systems. The creation of production systems based on cooperative relationships with the agricultural commercial organizations, having optimal production systems, as well as the creation of consumer, serving, service and credit cooperatives and further effective development of the households of population, peasant (farmer) households will secure an effective achievement of the objectives of the agricultural sector in Kazakhstan.

The role of cooperatives in the performance of agricultural production systems is due to the benefits of consolidation of small and medium-sized agricultural producers, particularly those which formed their production system only for the production of crop products. The practice of management that prevails in the production of agricultural products is focused on large-scale production.

Small and medium-sized agricultural structures are not able to self-purchase, and not involved into the production process of expensive equipment, "... it is more profitable for the group of farmer households to organize a cooperative for the use of agricultural machinery and passing it out to neighboring farms" [3].

The main means of production in agriculture is land. In order to increase the land equivalent ratio the complex measures for the processing of land, improvement of natural grasslands, creation of irrigated cultivated pastures, cultivation of perennial grasses, etc. are required. However, these actions will not be effective without regular improvement of agricultural techniques. The law of diminishing returns suggests that the growth of land equivalent ratio can be achieved due to the increment of labor and capital. [4].

One of the characteristic features of the production and processing of agricultural products is a closed technological cycle. Cooperation makes it possible to optimize the organizational and production parameters of the technological cycle by bringing together the different stages of the production process [5].

Agriculture is characterized by seasonality of production processes, which accordingly affects the results of the use of manpower and physical resources. In the majority of cases, the seasonality factor has a downward effect on the efficiency of production systems.

Cooperation of producers allows neutralizing the negative impact of this factor.

The analysis done allowed systematizing the benefits of the rural consumer cooperatives of small and medium-sized enterprises for the development of production systems of agro industrial complex and agriculture (Figure 4) [6]

For the further development of agriculture cooperatives, including the consumer cooperatives, and for enhancing the operation effectiveness of cooperative groups it is necessary to develop the control mechanism of cooperative process at the national level, to ensure a decent competitive environment, to create the model of organizational, economic and production processes for cooperative organizations.

In order to determine the effect of the rural consumer cooperatives on the efficiency of the production systems with the help of economic and mathematical modeling methods the mathematical economic model was compiled and solved.

The main objective of this model was to optimize the size of the rural consumer cooperative, provided the most efficient use of available resources. The target function of the model is the maximum profit.

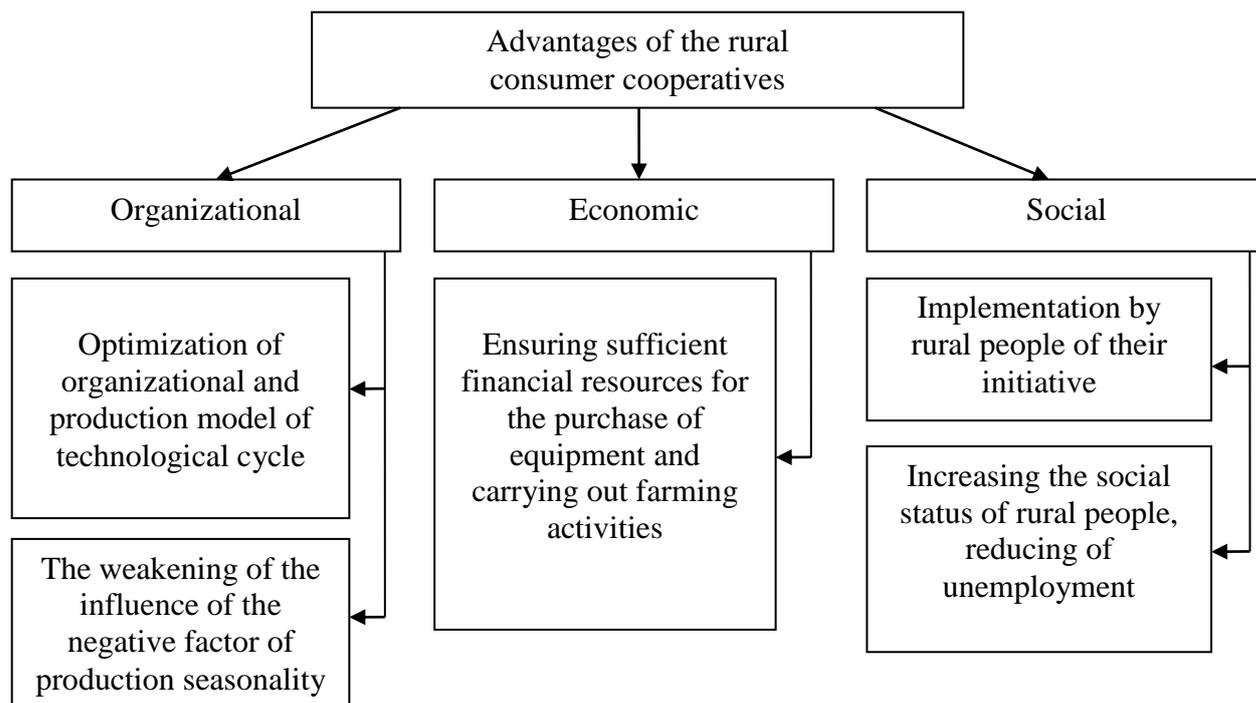


Figure 4 – Advantages of the rural consumer cooperatives

The result of mathematical economic modeling was the increase in the economic performance of the activities of rural consumer cooperatives and their members in the implementation of the optimal (model) production and realization of products (table 2). [7]

Table 2 – Economic indicators of the activities of rural consumer cooperatives and their members in the implementation of the model parameters of production and realization of products

The names of basic businesses for the creation rural consumer cooperatives	«Agricultural firm «Vladimirovskoye» LLP	«Karasu» LLP	«Sheminovskoye» LLP	«Kazak Uny» LLP
Production of gross output, thous. tenge	165 167	179 818	111 342	236 543
Involvement into cooperative organization of private subsidiary farmings, pcs.	490	590	450	650
Production in the households of population per 1 ha of agricultural land uses, thous. tenge / ha				
before the creation of the cooperative	1,65	1,57	1,96	1,48
after the creation of the cooperative	8,21	7,74	6,13	9,58

Provision of 1 livestock unit in the households of the population with agricultural land uses, ha / livestock unit				
before the creation of the cooperative	0,028	0,022	0,025	0,019
after the creation of the cooperative	7,26	7,84	6,94	7,24
Cooperative efficiency, thous. tenge	32,4	29,1	25,2	30.4

Conclusions.

Optimization of the processes of production and product realization through the rural consumer cooperative will significantly increase the index of provision of 1 livestock unit in the households of the population with agricultural land uses (on the average by 7.3 ha / livestock unit). This, in its turn, will increase the livestock production on 1 ha of agricultural land uses in the households of population (by 3-4 times), which indicates the increase in the efficiency of production systems in agriculture. In addition, the implementation of the developed model parameters will allow further receiving of gross agricultural production in the amount of 692,870 thous. tenge.

Thus, the development of rural consumer cooperatives would solve the following problems of production systems functioning in agro industrial complex and agriculture, such as:

- prevailing of a small-scale production in animal agriculture;
- labour seasonality;
- violation of the principle of the constancy of securing manpower for technical equipment and production facilities;
- ignoring of rational, specialized forms of work organization;
- monopolization of the acreage of spring wheat crops;
- violation of scientifically based crop rotations;
- the lack of financial resources for meeting the needs of agricultural producers in credit facilities in full;
- the lack of rural employment in public production.

Consequently, the development of rural consumer cooperatives can act as a major factor in the increasing of the efficiency of production systems in agro industrial complex.

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