

ORGANIZATIONAL MECHANISM OF THE MODEL ESTABLISHMENT FOR MEAT AND DAIRY PRODUCTION SYSTEM IN AGRICULTURAL ENTERPRISES

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***Abstract.** The article is about the necessity of methodical evaluation of complex systems management in livestock in order to identify the state of the system. Additionally were distinguished efficiency criteria and built mechanism for assessing the effectiveness production system in the agricultural enterprise.*

***Keywords:** efficiency criteria, production system, agricultural enterprises, integrated system of management, manufacturing process efficiency, meat and dairy cattle*

INTRODUCTION. To enhance the social and economic significance of the development in the meat and dairy industry should create a mechanism for the system of organizational, productive and economic activity parameters of agricultural enterprises. The main content of existing techniques confined to calculating indicators (ratios), and then compared them with standard values. However, the most important in the analysis - understand and correctly interpret the results of the technical processing output that, in fact, is the most laborious and responsible part of the analytical work. Unfortunately, the issue of contextual interpretation (correct logical and semantic interpretation) calculated data analysis was not studied.

MATERIALS AND METHODS. In assessing the complex systems, which include agricultural enterprises taken to distinguish the quality and efficiency of their production processes that were carried out. The quality of the production system is determined by optimal combination of all elements and stages of the production process (people, vehicles and objects of labor, and the main, auxiliary and natural processes) in space and time. For example, planning of organizational

structures in breeding complex production system should be carried out with a focus on continuity, threading, cyclical processes based on the use of highly productive animals, and modern information communication systems. That allow all participants to inform the complex manufacturing process of movement goods and state funds production to offset synchronization of all components of the production process [1].

In contrast to the quality of the production system, determined by the level of technological efficiency, production efficiency is the magnitude variable, dependent on the efficiency and quality control actions. So in this case takes place implemented by the time dynamic production process, which differs probabilistic multifactorial internal environment. In addition, even if the static component of the production system is ideally designed relative to proportion (duration) of various manufacturing operations. Their synchrony and rhythmicity production as a whole may periodically violated under the influence of destabilizing factors internal and external environment of the enterprise [2].

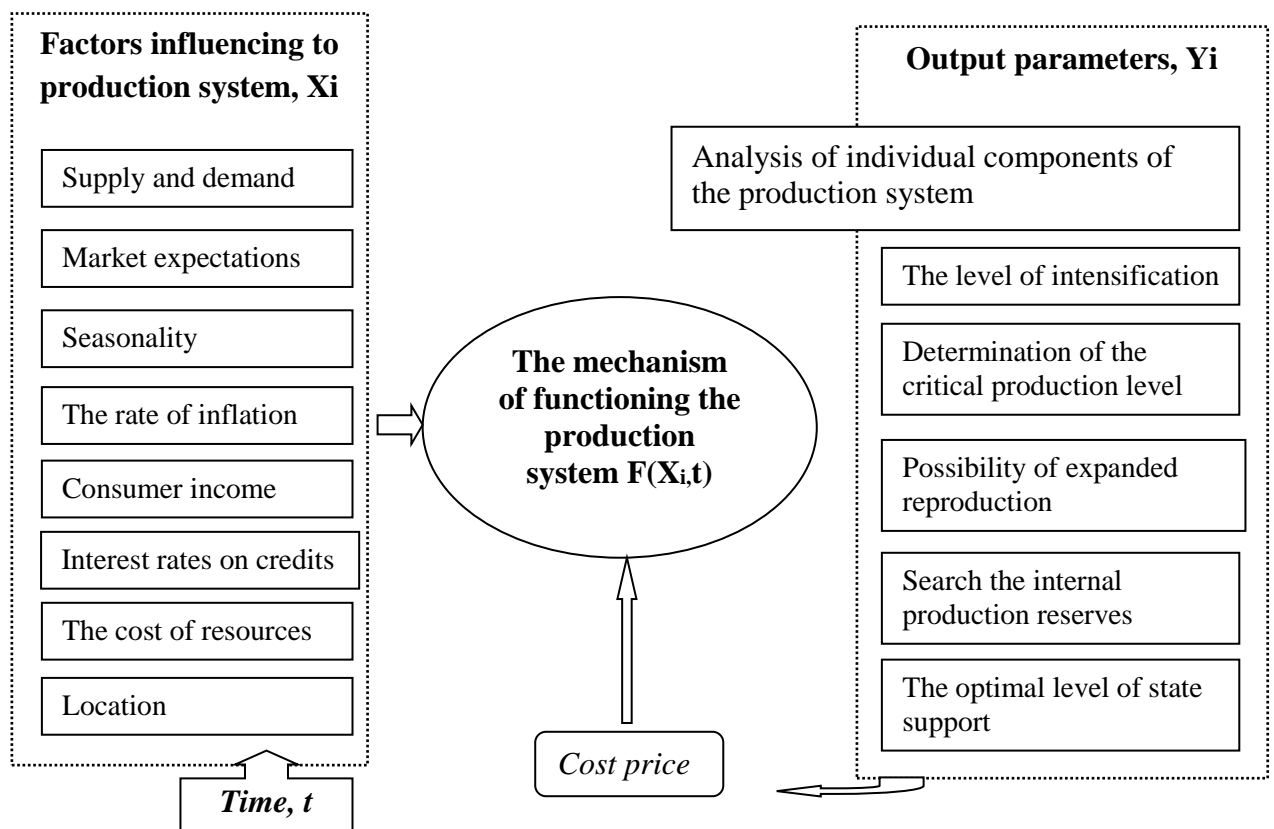


Figure 1 – Formation of the mechanism of production system operation dependency

To estimate the level of organization and production management, science has developed various local set of performance criteria. Depending on the type of system and the destabilizing influences, using quantitative deterministic, probabilistic and qualitative criteria that reflect different, generally not comparable, sides effectiveness of the system: technical, economic, social, etc. [2].

Essence of problem are the characteristics of criteria. They are certain rules and regulations to assess the effectiveness (as compliance of required and achieved results), and using quantitative characteristics combining the analytical expression of target systems and the means of achieving it (form the objective function). This approach is suitable for engineering systems cannot be used for the evaluation of complex systems using biological resources, which include livestock complexes, because to obtain necessary analytical dependency for such systems is extremely difficult, and in many cases impossible.

In this approach, quality indicators advisable include to the area permanently given system properties. It can be represented by analytical dependencies in the form of mathematical models of dynamic systems. The main problem of assessing the effectiveness analytical relations of production processes is confusion probabilities of occurrence those or other events. This is not due to lack of sufficient statistics with restrictions methods of classical probability theory, which application is permissible by repeatability events and immutability of conditions [3].

These requirements in complex production systems are rarely performed, because effective assessment of operating systems is carried out under uncertainty conditions and causes the greatest difficulty for researchers. So far not formulated a theory can provide an objective solution to this problem, so the choice of criteria depends on the methods of modeling systems.

Construction of optimal operation system for agricultural enterprises should start with holding structure, which according to selected parameters should be formed of the following components:

1) Technologic - combining functional units of production or manufacturing processes that shape the technological production cycle (forage production, fattening calves, etc.);

2) Economic - separation of responsibility centers, control points and performance criteria for the entire process or production cycle (fodder ration compiling, structure formation livestock)

3) Organization - distribution company in accordance with the goals and objectives (channels procurement of raw materials and sales of finished products).

The combination of these components may be subject to coordination of information and material flows of the company, which must comply with each other in structure, direction, quality and so on.

According to the optimal conditions, the financial flows fully reflect the movement of goods and raw materials. About their real expenses shows the cost, which in its turn provides the basis for the formation of the enterprise information flow. Thus, the system of management accounting is able to track the movement of material and financial resources. In the case when resources begin to overrun exceed possible level, the system loses its controllability. In this case, the company can still function and even achieve certain results, but these indicators will have a stochastic character and management decisions will be inadequate [4].

RESULTS. Such structural organization should provide the presence of mechanism to ensure the integrity of operation. Through effective internal organization of such a mechanism should be aimed at achieving effective functioning of external indicators that will improve the competitiveness and innovative development.

This mechanism must have in its structure analytical (estimated) part, which will provide a comprehensive analysis of indicators and criteria of system effectiveness and the organizational component with a set of functional properties for the tasks (fig.2).

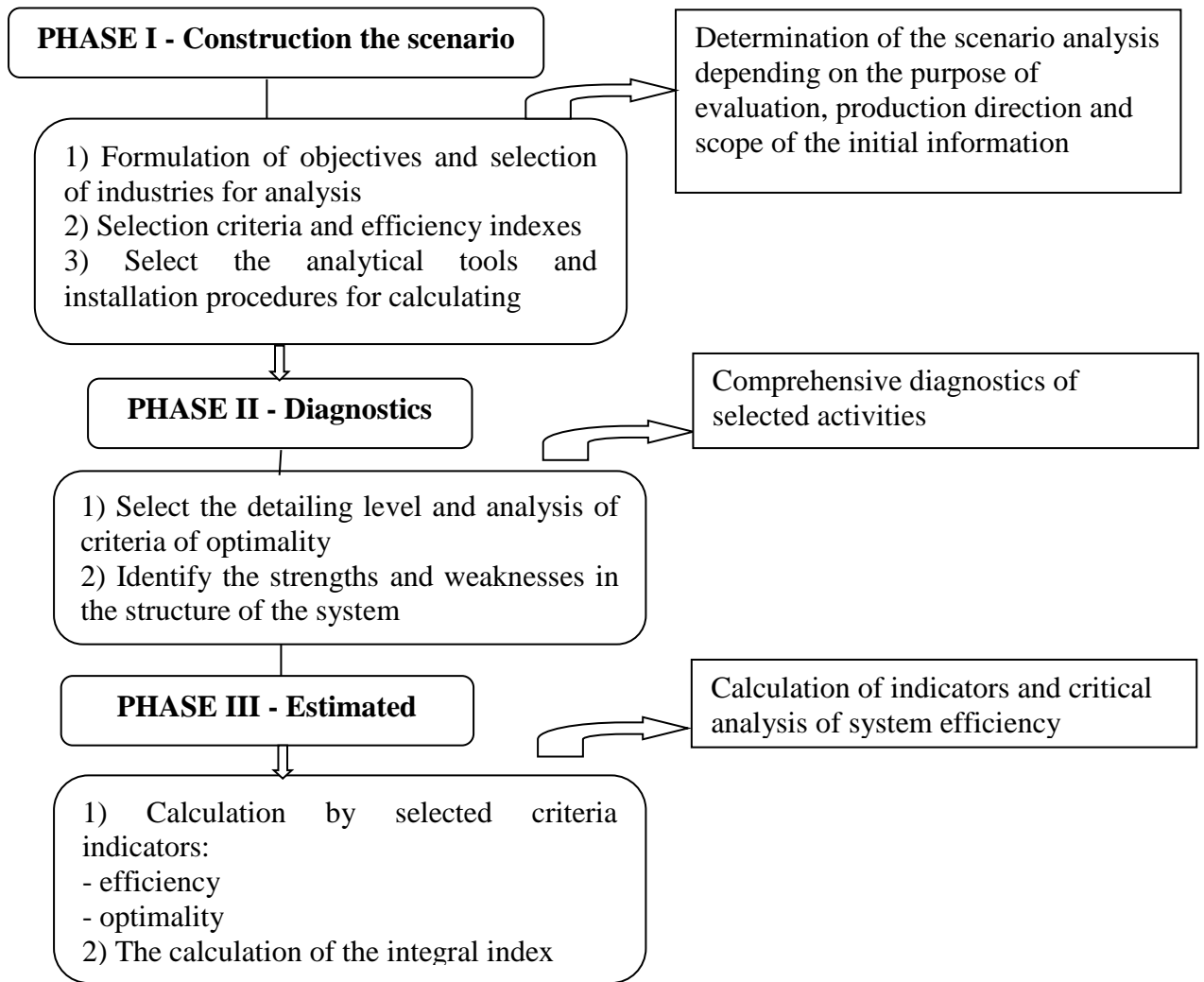


Figure 2 – Visual plan-scenario of research the production system effectiveness

Evaluation of this mechanism functioning is a leading for performance appraisal. This assertion is based on theoretical postulate confirmed by practice: the presence of a good algorithm of the production system increases confidence in obtaining the intended results. Basically good results can be obtained without an effective algorithm, but the probability of this is small. This provision is particularly important for organizational, technical systems and others, in which the results of operations are used in in real-time.

CONCLUSION. This property is manifested in the functioning of the system and depends on the properties of the system and of the environment. Of

course one should bear in mind that the system implements one or more operations. For most operations evaluation process has the character of forecasting.

As for the complexity indicators of economic efficiency, the integral factor in this case should be calculated on the the basis of two groups of performance parameters, that are displayed in the ratios of optimality, where used the limit values like the quantitative characteristics.

In general, the evaluation of complex systems is carried out to identify the state of the system, the efficiency of which depends on the goal in the given conditions; optimization activity (selecting the best algorithm of several that implement the functioning of system); in decision making process regarding the management system.

As the effectiveness criteria of the agricultural enterprise activity can use the following: the availability of resources, funding, labor productivity, the level of industrial and economic activity and more.

Development of modern theoretical and methodological approach to the assessing of quality and efficiency level of economic activities with the aim of its optimal regulation is extremely important scientific and technical challenge, because the process of production and management is capital-intensive direction of business development [5].

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