Introduction of the Cluster Complex and Innovative-Interrelated and Interacting Management Models and Transportation Cotton and Textile Products

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ABSTRACT

The article explores the methodological approaches to the implementation of the cluster complex and innovation-related through the use of econometric models of management and transportation of cotton and textile products. The authors of this article explore various integration structures for the formation of an industrial and production structure, give their assessment of the adequacy of the use of modern innovative technologies in relation to cotton and textile enterprises, as well as the storage and transportation of finished products (CTP and TGP). The paper proposes an innovative organizational and industrial structure of the cluster system and its logistics in the management of cotton and textile enterprises.

Keywords: cluster, industry, innovation, cotton-textile cluster, sub-clusters of the cluster, core of the cluster, internal and external factors, transportation of finished products, logistics, communications and interrelationships between stages

To date, the development of the economy in New Uzbekistan is becoming more and more relevant, the introduction of an innovative cluster method in the agro-industrial complex, since the economic efficiency in this industry, each innovation becomes even more developed. Each scientific development must be economically evaluated in terms of profitability and labor costs. In world practice, the mechanisms of strategic management of the economic development of agro-industrial complexes are successfully operating, namely, the creation of agro-industrial clusters.

Clusters represent the integration interaction of all stages of the organization of the production process, from forecasting the needs of products, growing cotton, primary and secondary processing of raw cotton, and ending with the release of finished products and their sale on the market.

The chain of production and technological stages of the organizational and industrial production process of the cluster system in cotton and textile enterprises is divided into independent interconnected and interacting production stages in the manufacture of the final finished product.

In order to use industrial-production clusters at enterprises of cotton-textile and agro-industrial clusters, it is necessary to determine the list of innovative cluster production-technological sectoral and inter-sectoral modernization structures necessary for the use of which, in the near future in Uzbekistan, will help to accelerate the development of the national economy. The creation of industrial and

production clusters requires the presence of significant interrelated and mutually conditioning organizational and technological prerequisites, starting from the stages of procurement, primary and secondary processing, the release of finished products and their delivery to consumers.

Main part. Building interrelated models of the complex, the task of planning and managing enterprises of the cotton-textile cluster, it becomes necessary to identify a number of redistributions (contours) in the production of enterprises and study their activities, as well as the relationship of each of them with other interconnected stages (Fig. 1).

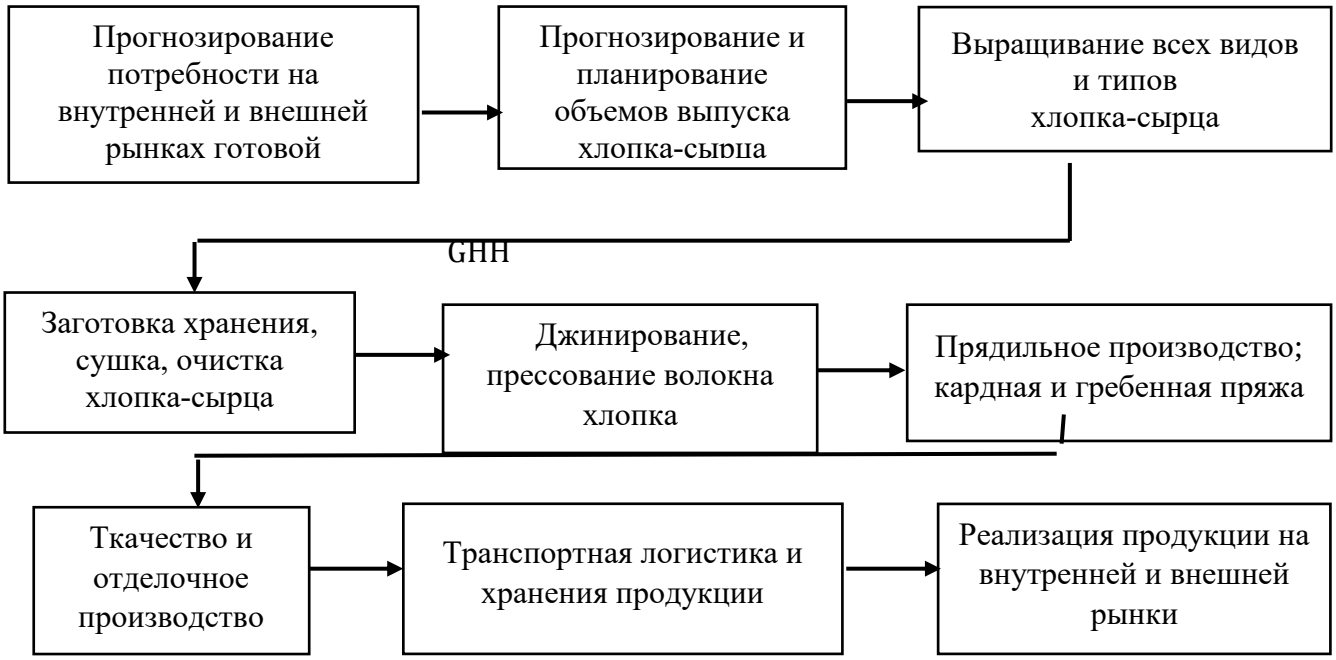

Fig.1. Cluster scheme of the industrial production process production of finished cotton and textile products and its logistics

When solving the problem of decomposition, allocation of zonal clusters (repartitions) in the overall chain of the cluster, one must proceed from the accepted structure of the production process chain for obtaining finished products. It shows the production process for obtaining the final product (fabric) in the industries: cotton-textile, agro-industrial, and thirteen circuits (local clusters) are schematically identified. The quantity and quality of the produced finished product depends on their rational functioning. An analysis of the activities of all circuits will make it possible to establish and determine the costs for the implementation of the optimal option - to the cluster approach to managing the activities of all circuits for the efficiency of the final product.

In the course of modeling individual contours and on their basis, a generalized cluster model is compiled that links the entire process of obtaining finished products into a single whole.

In this case, the cost savings in one circuit will inevitably be absent from the costs in the other. For example, the costs of forecasting the volumes of product demand (1-loop), then growing all types and types of cotton (loop-(2-4) and drying and cleaning, as well as ginning (2-loop) of raw cotton can increase compared to the former, then the costs of preparatory and spinning (13-14 circuits) may decrease, and in general, the efficiency of production for the manufacture of the final finished product-fabric will increase.

After the decomposition, you can start building an econometric model by choosing an optimization criterion for each cluster contour. The method for solving this problem is determined in two stages. there is a formation for each contour of the source material for the tasks of optimizing the activity of each of the contours and in general for the generalized cluster.

For each circuit, indicators characterizing its activity are selected (selected). minimizing the amount of defects and litter in the cotton fiber. Moreover, this criterion should not contradict other contours or present the requirements of the cotton-textile cluster to the previous contours.

Consequently, the general problem of choosing local criteria can be solved as several successively solved series of optimization problems, and the number of such problems is equal to the number of contours. The above can be reduced to the following statement of the cluster problem:

Let there be k-production-technologically consecutive circuits that are part of the cluster. The general criterion of cluster activity is defined.

It is required to find the criterion for the operation of the circuit, each of which is characterized by inputs X ip outputs

Y i,p (i= 1,k; p=1,.., m; j=1,..,n , and m>n

Any of the output indicators of the i-th circuit can serve as a criterion for optimizing its

Thus, in case of cluster strategic planning, the output indicator of the k-th circuit, which serves as a generalized criterion for optimizing the activity of the cluster, it is possible to draw up an optimal work plan for the k-th circuit. To draw up an optimal work plan for the k-th circuit, it is necessary to take into account the requirements, there must be output K-1, then the optimization of the production plan k-2 considers the conditions k-1, etc. up to the i-th stage, where (i = 1,. .,to).

Therefore, having drawn up an optimization plan for all the contours of the cluster, from the procurement of raw materials to the receipt of operation. Let's take a look at the last one. The result of its functioning is the release of final products of a certain quality and volume in the cluster system of the production process for the production of final products of the cotton-textile cluster. In this case, the global criterion for cluster operation can be considered as a criterion for the Kth circuit. Therefore, it is a function of the input indicators of the k-th contour of the cluster

$Z= F(\sum_{n}^{m} X_{ip})$;

The connection is stochastic and the dependence can be expressed by the regression equation.

$$Z=b_0 +b_1 x_1+……..+b_(mX_km)$$

Then the task of optimizing the activity of the k-th contour of the cluster can be formulated as follows.

Let there be m input variables Xk1, Xkm and output variables Yk1, Ykn

For each Ykj,

$$Y\ kj=F(Xki,\ Xkm) =b_0^'+b_1^'+b_1^'+b_1^' x_(k_1)+……+b_m^' x_(k_m)$$

It is required to find such Xcr, Yij for which Z=F (∀ij,Xip)-max (min).

With the following restrictions:

$$Y\ ij= F(Xip, Xcr) \text{ for } \bigvee_{j} = I,n \quad (1.1)$$

$$\min Yij \le Yij \le \max Yij; \quad (1.2)$$

$$\min Xip \le Yij \le \max Xip; \quad (1.3)$$

$$Xip \ge 0, Yij \ge 0; \quad (1.4)$$

finished fabric products, it is necessary to consider the system of organization and operational cluster planning and management for the implementation of production plans (contours) of the cluster, considering them as links in a whole unified process of obtaining finished and implementing products.

The study of this problem is based on a number of initial premises. One of them is the cluster representation of the entire chain of the cluster production management system, and the other structure is the members of the cluster planning and management system. The currently available models of cluster planning and

management are a reflection of individual aspects of management considered in isolation. Their simple sum turns out to be inadequate to the real conditions of production and cannot be used to describe the cluster production structure of production management systems for the production and sale of final products.

Therefore, the introduction of the cluster construction method in the production model of sectoral cluster planning and management is necessary to solve the problem of balancing and optimizing production plans, it is necessary to develop a methodology for modeling systems of planning decisions, turning them into complexes of econometric models of the main core (one or two head enterprises) of the cluster management system.

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