Nat. Volatiles & Essent. Oils, 2021; 8(5): 10714 - 10721

NVEO
Natural Volatiles &
Essential Oils

The issues of efficient use of the potential of cotton ginning enterprises

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Abstract

In article recommendations use of economic resources on cotton the enterprises in the conditions of market relations are considered and offered. Researches by definition of the basic directions of increase of efficiency on cotton the enterprises are conducted. In the present work by means of the theoretical and analytical data problems on efficiency increases on cotton the enterprises are analysed and defined. In work the basic directions of increase of production efficiency on cotton the enterprises are defined and recommended.

Keywords: digital economy, efficiency, economic potential, efficiency, capacity, fixed capital, economic resources.

Introduction

In the Republic of Uzbekistan, much attention is paid to the issue of rapid economic development. As a result, industries are booming. In 2020, modernization and competitiveness programs were promptly implemented in 12 leading industries. As a result, in 2020, economic growth in the country amounted to 1.5%, the gross domestic product amounted to 590.261 billion soums. This year, 197 large, thousands of small and medium-sized enterprises and infrastructure facilities have been built in the country. All sectors and industries have a role to play in achieving this success. In particular, the ginning industry makes a significant contribution to the development of the economy and provides raw materials for many sectors of the economy. Ginneries play an important role in the economy of our country. Ginners dry, clean, separate and store the grown raw cotton and deliver it to the sectors of the economy at the right time. The efficiency of enterprises of various forms of ownership operating in the economy depends on the efficiency of activities in ginneries. One of the important issues is to increase the efficiency of economic resources used in the activities of ginneries and to establish the production of competitive products through the rational use of production capacity. The production efficiency of ginning enterprises depends in many respects on the final technical and economic results of all its departments, economic potential and factors of its use, the technical equipment used and their efficiency. For the successful implementation of the important tasks set for the economy, it is necessary to effectively use the available economic resources in each sector of the economy. The development of ginneries and the increase of its contribution to the economy will make it necessary to further increase their production capacityAlong with the increase and enhancement of production capacity, the effective use of existing economic potential in enterprises is an important area. This requires more efficient use of each unit of economic resources in ginneries. One of the most important issues on the agenda today is the efficient use of production resources in ginneries and, consequently, the increase of economic potential.

Analysis of Relevant Literature.

Many scientists and researchers have been involved in the development of the economy and the increase of competitiveness through the contribution of industries, economic potential and efficient use of resources. All of these issues depend on economic potential. Many economists have tried to define it in

terms of economic potential. Russian scientist Sidorov A.P. In his research, he stated that "the economic potential of production is the maximum production of products of a certain volume and type" [7,23]. In this definition of the economic potential of production by A.P. Sidorov, this concept is well explained, but, to some extent, confuses production capacity with the concept of production capacity. We know that the production capacity of industrial enterprises means the ability to produce products at the highest level.

Z.P. Rumyantseva, N.A. Salomatin and R.Z. Akberdin in their scientific researches connect the economic potential of production with the volume of production defined in the production program of the enterprise. “The economic potential of industrial enterprises, joint-stock companies and shops is realized through the implementation of their production programs. Their production program describes the name, quantity, production time and production value of the products to be produced » [10,300-301] The main drawback of their views is that the concept of economic potential is determined not only by the volume of production, but it is a very broad concept.

Any material production consists of its essential elements — the tools of labor, the objects of labor, and the unity and interrelation of labor. Production capacity in each organization depends on two important factors: the availability and development of key elements of production and the level of use of these elements in the production process. The development and efficient use of these two factors determines the level of activity and development of a manufacturing enterprise. Economic potential is defined not only by fixed assets, but the concept of economic potential is defined by all economic resources in production, i.e. working capital, labor resources and even available information resources are closely related to the concept of economic potential.

Methodology of the Research

Taking into account the importance of efficient use of economic resources of cotton processing enterprises in the context of market relations and, based on this, the development of economic potential, the activities of enterprises in this sector were selected for analysis. In the study and analysis of the problem, research, economic observation, economic analysis, statistical analysis, comparative analysis and other methods were used.

Analysis and Results

The basis of the economy is enterprises and organizations and their economic potential. The economic potential of enterprises and organizations is the economic potential of the country. Consequently, increasing the economic potential and efficient use of the available economic potential is one of the key issues today. To study the current level of the economic potential of our country and the state of its use, it is necessary to study the situation in its industries. To analyze the economic potential, we took the enterprises of the cotton ginning industry in our country.

The ginning industry plays an important role in the country's industrial sector. In recent years, there have been significant changes in the activities of ginneries. One of these changes is the change in the form of ownership of network enterprises. As a result of economic reforms, the form of ownership at the enterprises of the industry has changed, joint-stock companies have been created, joint ventures have been created, and private enterprises have emerged. At present, cotton processing clusters are being created on the basis of cotton ginning plants. An important role is played by the modernization of cotton growing, which is one of the most important sectors of the economy. Ensuring the stable and efficient functioning of the national economy, bringing it to the level of development of developed countries, various political and economic changes, fluctuations in world market conditions, "resilience" to crises, opportunities and potential for independent development is the leading sector in agriculture. depends on

the radical reforms in the process of growing cotton and their results. However, at the same time, the modernization of cotton growing is closely linked to changes in other spheres of socio-economic life. Timely and high-quality processing of raw cotton is a topical issue and determines the effectiveness of subsequent processes. Cotton is a valuable raw material from which about 300 different products are produced. An average of 30-35 kilograms of cotton fiber is needed for 100 kilograms of raw cotton. As a result of processing this fiber in textile mills, it is possible to get about 3,000 meters of fabric. From 100 kilograms of cotton you can get another 6-8 kilograms of down, 11-12 kilograms of oil, 2.5 kilograms of soap and other products.

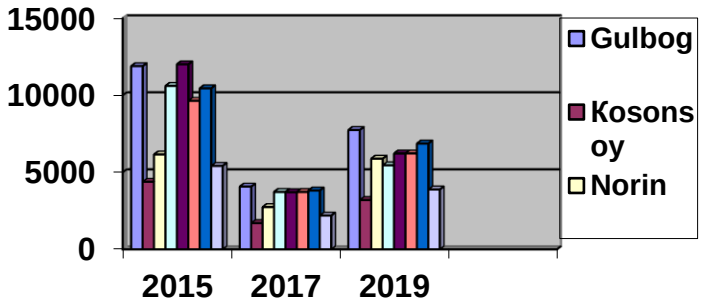
The ginneries of Namangan region also play an important role and contribution to the ginning industry of the country. There are 8 ginneries in Namangan region (Table 1). Table 1 analyzes the use of production capacity of ginneries in Namangan region in 2015-2017-2019. Their production capacity in 2015 was 70,553.0 tons of cotton fiber, while in 2017 the production capacity decreased to 25,690 tons, and by 2019, the production capacity of all enterprises was 45,487 tons, which is 19,977 tons more than in 2017. tons. The production capacity of enterprises depends on many factors. The production capacity of ginneries depends primarily on the raw cotton received by the enterprise. With the change in the amount of raw cotton, the production capacity of enterprises also decreases. The diagram of the production capacity of enterprises is shown in Figure 1. We can clearly see that the level of utilization of production capacity in almost all enterprises decreased in 2017.

Table 1. Analysis of the use of production capacity of cotton ginning factories in Namangan region

		2015	**2015**	**2015**	**2017**	**2017**	**2017**	**2019 й**
т/р	Name	Capacity, tons	Capacity, thousand sums	Number of employees	Capacity, tons	Capacity, thousand sums	Number of employees	Capacity, tons
1	"Gulbog pakhta tozalash" OJSC	11891,0	38047,0	368	4072	50000	368	7747
2	"Kosonsoy pakhta tolasi" OJSC	4385,0	12088,8	275	1704	15000	275	3203
3	"Norin tola" OJSC	6155,0	25343,2	211	2743	30000	211	5884
4	"Pop pakhta tolasi" OJSC	10607,0	28299,5	513	3726	33000	513	5456
5	"Namangan 3-pakhta tola" OJSC	12009,0	39118,7	381	3709	45000	381	6222
6	"Uychi pakhta tozalash" OJSC	9639,0	35191,6	504	3726	40000	504	6223
7	"Uchkurgan pakhta tolasi" OJSC	10453,0	36748,1	409	3818	40000	409	6866
8	"Chust pakhta tolasi” JSC	5414,0	22982,0	396	2192	24000	396	3886
	Total	70553,0	2378189,0	3057	25690	277000	3057	45487

Note: Table based on data from the State Statistics Department of Namangan region prepared.

Figure 1. Diagram of the use of production capacity of ginneries in Namangan region



A total of 3,057 people are employed at ginneries in the regionIn 2015, the highest production capacity of ginneries was Uchkurgan Pakhta Tola (10,453 tons), Gulbog Pakhta Tozalash (11,891 tons), Namangan 3-Pakhta Tola (1,2009 tons) and Pop Pakhta Tolasi (10607.0 tons) are available in joint stock companies. They account for 63.72% of the total production capacity of ginneries in the region. Efficient use of production capacity at these enterprises has a significant impact on the level of utilization in the total production capacity in the region. The high potential of these enterprises has been maintained in recent years.

Table 2 Volume of products produced by Gulbog Pakhta Tozalash JSC in natural terms, tons.

No	Indicators	2015year	2017 year	2019 year	In 2019 compared to 2015 %
1	Fiber	10822	3883	7667	70,8
2	Coton wool	341	122	242	70,9
3	Cotton seed	16613	5980	11795	71,0
4	Gin motes	217	78	154	70,96
5	Lint	1945	7001	1381	71,0

Note: The table is based on enterprise reports.

Figure 2. Dynamics of the volume of products produced by Gulbog Pakhta Tozalash JSC in 2015-2017.

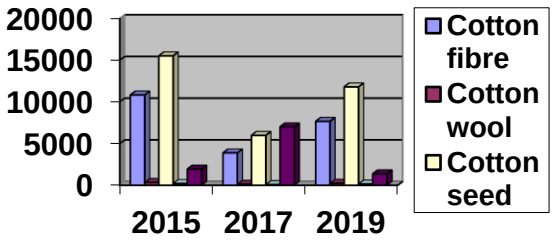


Figure 2 analyzes the volume of products produced by Gulbog Pakhta Tozalash JSC in natural terms. The company produced 10,822 tons of cotton fiber in 2015, 3,883 tons in 2017 and 7,667 tons in 2019. In 2017, it decreased compared to 2015. In 2019, we can see an increase compared to 2015, while it decreased compared to 2015. We can see that the volume of cotton fiber and other products produced at the

enterprise depends on the level of utilization of production capacity at the enterprise. The diagram in Figure 1 also illustrates this situation.

The production of competitive products, in turn, requires attention to a number of changes. One of such changes is the establishment of efficient operation in manufacturing enterprises, the establishment of efficient operation of equipment and devices used in production. In order to produce competitive products in ginneries, it is necessary to establish the efficient operation of existing machines and equipment.

The quality of cotton fiber obtained in the activities of ginners depends on the presence of impurities and defects in its composition, as well as the loss of fiber properties in the process of separation of these mixtures. During the separation of fiber from raw cotton, the impurities left in it have a significant impact on the quality of the fiber. Therefore, quality cleaning of raw cotton in the period before ginning is of great importance. For the quality of cotton ginning, it is important to choose cleaning equipment in accordance with the physical and mechanical properties, type, navigation, condition, humidity and level of contamination of raw cotton.

The raw cotton delivered to the gin may contain small and large mixtures. Holes of small mixtures 10 mm. While large mixtures are non-mesh mixtures of this size. Mixtures of cotton can be divided into active and inactive species. Inactive compounds are present on the surface of the seed cotton and can be easily separated when the cotton is lightly shaken. Inactive compounds do not cause much difficulty in the cleaning process. The active compounds are present in the cotton and their separation is a somewhat difficult process. Transferring them first to a series of inactive compounds and then purifying can be effective.

The machines for cleaning raw cotton from small and large mixtures consist of pile drum sections and saw drum sections. Fine mixtures are well cleaned in the pile drum section, while large mixtures are well cleaned in the saw drum sections. The performance and cleaning efficiency of such machines are important indicators. The cleaning efficiency is calculated as follows:

$$K_M = \frac{C_1 - C_2}{C_1} \bullet 100 \quad \%$$

Here: C1, C2- the degree of contamination of seed cotton before and after cleaning.

Many factors affect the efficiency of the process of separation of large and small contaminants from cotton. Among them are the efficiency of such equipment, the level of moisture and contamination of raw cotton. The most important indicator is the moisture content of cotton. The humidity of the cotton should be brought to the norm. Being above or below the norm affects efficiency. Therefore, the most important measure before the process of cleaning raw cotton should be to bring the moisture content of raw cotton to normal. It requires a lot of attention.

The process of cleaning cotton from large and small contaminants is carried out in the drying and cleaning departments of ginneries. Today, 8 gin drum SCH-02, CHKH-3M2, UKHK sections and 1KHP equipment, 1KHK ginners and EH.178 pile blocks are used in ginneries to clean large and small contaminants.

Today, in order to increase the efficiency of ginning and ensure the competitiveness of cotton fiber in ginneries, attention is paid to the use of continuous cleaning processes. This process is carried out with the help of a unit consisting of several sections of the brand "UKHK". When using this unit, there is no need to use transport for transportation, transfer and collection of raw materials, which are auxiliary processes. At the same time, the impact of forces that negatively affect the physical and technological properties of raw

cotton has been reduced. This, in turn, allows to maintain the quality of fiber, which is the main product of the ginnery, and reduce the degree of damage to the seed.

This set of equipment cleans cotton from both large and small contaminants. The sections of the UKHK type aggregate can be of three types: UKHK.01-initial section, UKHK.02-middle section, UKHK.03-final section. If the supply rollers are installed in section UKHK.01, in UXK.03 section a closed groove is installed at the outlet of the cleaned cotton machine. UKHK.02 is adapted to connect additional sections on both sides, at the expense of this middle section, the number of sections in the aggregate can be increased or decreased. Table 1 below shows the technical parameters of the UKHK aggregate.

Table 1 Technical parameters of the aggregate UKHK

No	Indicators	UKHK
1	Cleaning efficiency, %	91-95
2	Productivity of work on cotton, t/hour:	
	On growths 1 and 2	7
	On growths 3and 5	5
3	Installed power, kW total	13
	Including:	
	For saw cylinder and waste auger	4
	For brush cylinder	9
4	Number of revolutions per minute	
	for saw cylinder	300
	for brush cylinder	945
	for waste auger	130

There are possibilities to further improve the cleaning efficiency of this unit. For this, it is necessary to study the working process of the unit and conduct experimental tests. In order to increase the efficiency of this process, it is necessary to increase the efficiency of the unit, increase the working speed, measure the temperature of the cotton and stop the process in case of abnormal conditions and send a message to the central control point.

The results of this analysis indicate that there is a small imbalance in the use of available resources and production capacity in ginneries. This imbalance is also reflected in the minced figures. We propose to make more efficient use of available resources to overcome this situation and ensure more rapid development. In order to increase the efficiency of economic resources used in the activities of ginneries, it is necessary to choose an intensive type of activity. This will require a transition to intensive factors of economic development. The transition to intensive factors of economic development implies the full use of all the opportunities of economic and scientific-technological development. Ensuring intensive development of ginneries through in-depth analysis and organization of efficient operation of ginneries, increase of ginnery efficiency, reduction of downtime and breaks, reduction of raw material consumption, creation of energy-saving technologies and facilities and introduction of ginneries possible. At the current level of a market economy, given that modernization of the economy is the main focus of the agenda, this direction is legitimate and will be among the categories that must be fulfilled.

In order to implement the path of intensive development in ginning enterprises, it is necessary to implement the following directions:

1. To increase the productivity of machine tools in the enterprise.
2. Improvement of technological processes, creation of low-resource technologies.
3. Ensuring the release of more useful products from the raw materials used.
4. Organization of professional development of current employees, scientific organization of their work.
5. Merger of two cotton gins located close to each other. Even if one enterprise has the capacity to process this cotton, there is no need to process it in two enterprises.

Conclusion and Suggestions

It is important to consider the effective use of the existing economic and production potential of ginneries in a comprehensive, integrated manner. This concept is comprehensive and involves the proper use of each unit of resources at the entrance to the gin, its placement, the production of quality products, while increasing the amount of product obtained from each unit of resources. The use of every available economic resource in ginneries should ensure that their strategic goal is achieved and that the enterprise makes more profit by increasing its market share. Effective use of the economic potential of production to ensure the optimal allocation of all technological resources in the enterprise, timely and quality repair of machines, tools and mechanisms, to organize the work of the enterprise on a scientific basis, to establish division and cooperation, to create a proper and rational workplace; should lead to the improvement of working methods, the organization of flawless work. Effective use of economic potential will intensify the activities of ginneries and will contribute to the development of the enterprise.

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