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ANALYSIS OF THE RESULTS OF THE INITIAL OPERATION OF COTTON WITH HIGH MOISTURE IN COTTON CLEANING PLANTS

Parpiev Azim Parpievich,
Tashkent Textile and Light Industry Institute

Sabirov Ilkhom Kakhromonovich,
Tashkent Textile and Light Industry Institute

Abdullaev is the son of Sharofiddin Yuusup
Tashkent Textile and Light Industry Institute
G -mail : shabdullayev061193@gmail.com , phone: +998(99) 352-20-20

ABSTRACT

In this article, the results of initial processing of high moisture cotton in cotton gins are analyzed. The results of initial processing of low-quality cotton in Gharam , quality storage, proper organization of long-term storage, layering taking into account humidity, otherwise, if the storage process is not properly organized, the effect of dirt and moisture on the results of initial processing of cotton was studied.

Garam , cotton, fiber, quality, storage, humidity, pollution, temperature.

The fact that cotton-textile clusters are widely popularized in our republic and that they are tasked with the production of finished products of high added value puts serious demands on the quality of fiber produced in cotton ginning enterprises [1, 2]. This, in turn, depends on the quality of cotton storage.

The transition of cotton ginning enterprises to the cluster system requires a radical revision of the technological processes of primary processing of cotton. The reason is that until this time, the technological regulation of the initial processing of cotton, the selection of technological equipment, and the determination of work modes were carried out based on the interest of the cotton ginning enterprise. That is, at first, the goal was to reduce the cost of work, save electricity and fuel, and increase economic efficiency.

In recent years , in our republic, special attention has been paid to the production of high-quality finished products that ensure competitiveness in the world market, based on the improvement of techniques and technologies in cotton-textile clusters , on the basis of deep processing of the grown cotton raw materials, a number of textile and light industrial enterprises are being built, equipped with modern technological equipment, cotton there is a demand to increase the quality of fiber produced in cleaning enterprises. In the cotton cleaning industry, a number of works have been carried out to improve fiber quality, including cotton storage, cleaning from small and large impurities, ginning, dressing techniques and technologies have been modernized, the fiber quality control system in technological processes is being improved [3, 4] .

In cotton processing facilities and cotton gins, cotton is received and stored separately according to selection, industrial types and picking methods. Collection, storage and processing of cotton bunches is carried out separately by each farm, according to the type of fiber, taking into account its quality indicators, following the "Manual on picking and preparing cotton" [1,5] .

In cotton ginning plants, the initial processing of high moisture cottons is one of the most important processes. For this reason, in order to study and analyze the results of preliminary processing of cotton with high moisture content , experiments were conducted at the cotton ginning enterprise of "MUZRABOT INDENIM CLUSTER" located in Muzrabot district of Surkhandarya region . It should be noted that the technological equipment of the enterprise is in very good technical condition and prepared at the required level.

"MUZRABOT INDENIM CLUSTER" located in Muzrabot district of Surkhandarya region . At first, the following information was found about the low-quality garam:

1-Garam size 7x14 meters, initial dirtiness 32%, initial humidity 14.8%, new selection Bukhara-6, new Industry-5, class-3, storage time from 05.11.2021 to 23.02.2022, ventilation repeated 6 times, ventilation time of 48 hours, weight of 96 tons.

2-Garam, size 7x14 meters, initial dirtiness 39%, initial humidity 15.4%, new selection Bukhara-6, new Industry-5, class-3, storage time from 12.11.2021 to 26.02.2022, ventilation repeated 6 times, ventilation time of 48 hours, weight of 92 tons.

After the start of the initial production process in Gharam, samples of cotton, seed and fiber were taken in special bags from Gharam, after the drying drum, and from Gin latogi, and the moisture content of cotton, fiber and seed was determined in three duplicates on the VHS-M1 equipment of the "MUZRABOT INDENIM CLUSTER" laboratory. , small, large and general impurities were detected in the pollution detection equipment of LCM Table 1.

It is clear from the results of the experiment that the process of storing cotton with high humidity is not properly organized, as a result of which the humidity and dirtiness are different in different parts of the cotton. This affects the quality indicators of the cotton stored in the warehouse. The moisture content of the samples taken from Gharam is different from the results of the analysis: 11.81%, 11.38%, 12.11%.

Table 1 The results of the samples taken from different points in the initial processing of cotton on dirt and moisture

t/r	Selection and new industry of cotton in Gharam, class	Repeatability	Garam cotton				Cotton moisture content after drying %	Cotton in cotton wool			
			humidity %	Impurity %				humidity %	Impurity %		
				Small %	big %	Total %			Small %	big %	Total %
1	Bukhara-6 5-new 3rd grade	1	11.81	16.81	26.2	43.01	10,20	10.51	1.30	1.18	2.48
2		2	11.38	14,21	28.83	43.04	10,14	10.44	1.32	1.53	2.85
3		3	12,11	16.05	26.9	42.95	10.05	10,12	1,2	1.48	2.68
Average			11.77	15.69	27,31	43.00	10,13	10.36	1.27	1.40	2.67

You can see the difference in dirt. In places with a lot of pollution, the humidity is high and the heating process takes place, as a result, the color of the cotton changes and the level of yellowness increases.

The amount of impurities and defective impurities in the fiber was determined by the AH analyzer, Table 2.

Table 2 Amount of defective compounds in fiber

No	Sample weight	The weight of the remaining fiber	Greatness and filth K = 1, 74		Ugar (g)
			Gr	%	
1	100	85.8	12.36	21,506	1.84
2	100	85.2	13.4	23,316	1.4

The conducted experiments were conducted based on existing standards. In order to determine the temperature of the cotton components, the temperature of the cotton components was determined 5 times using a thermometer from different points from the gin, after the drying drum, after the separator of the hopper, after the hopper, from the gin tray, from the raw material box, from the seed coming out of the gin.

Table 3. Temperature of cotton components

t/r	Selection and new industry of cotton in Gharam, class	Repeatability	Cotton temperature					Temperature of raw materialst	Cold temperature
			Garamda	After 2SB-10	After the UHC separator	UHC after	The demon is beaten		
1	Bukhara-6 5-new 3rd grade	1	12.7	18.4	13.8	9.6	11.9	20.8	17,8
2		2	12,4	18,9	13,6	9,1	11,8	20,4	18,6
3		3	13	18,8	15,7	10	12,4	20,5	17,4
4		4	13,6	17,3	16,3	9,3	11,9	20,5	18,9
5		5	12,6	15,7	13,8	9,4	12.4	20.4	17.7
A fugitive			12.86	17.82	14.64	9.48	12.08	20.52	18.08

It can be seen from table 3 that the temperatures at different points of the cotton in the garment are also different. As a result of the different humidity and pollution in different parts of the furnace, the heating process is also different, and the temperature is also different. It can be seen that the temperature changes over time as a result of technological processes.

Based on the obtained results, it can be said that the results of initial processing of cotton with high humidity depend on its storage process. Due to the improper organization of the storage process, the humidity and impurities in different parts of the cotton in the garment vary, which in turn causes the temperature to vary, and as a result, it affects the results of the initial processing of the cotton.

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