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STUDYING THE TYPES AND THEIR COMPOSITION OF POLLUTANT MIXTURES CONTAINING COTTON SEEDS

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Abstract: This article identifies the types of impurities in cotton and their composition. Technologies at cotton ginning enterprises have been studied. Impurity compounds cause a decrease in the quality indicators of seed cotton, and the processes of deterioration of cotton fiber have been studied. To obtain high-quality cotton fiber and seeds, impurities in seed cotton were experimentally determined.

Keywords: cup, leaf, analytical balance, machine collection, manual collection, branches, flower petals, technological process.

Introduction. Currently, one of the requirements for cotton ginning enterprises is aimed at preventing damage to cotton fiber during production processes. The cleaning process of cotton fiber inside the factory under the conditions of the new conditions in the preparation and storage of cotton raw materials, the need for separate picking and storage of raw materials according to technical and selection varieties of cotton farms more responsibility increases. This makes the cleaning process of cotton fiber difficult [1].

Literature analysis and methods. The degree of contamination of seed cotton when picked by hand depends mainly on the attention of the picker, while when picked by machine, it depends on timely and quality defoliation of cotton leaves. will be [2].

The impurities found in seed cotton are divided into organic and mineral substances in terms of their origin.

Organic bodies include parts of the cotton bush - leaves, branches, corms, flower petals and other plant parts (gum and other weeds).

Mineral additives include stone, sand, soil, slag and gravel.

Impurities in seed cotton are conditionally divided into two groups in terms of size. Cotton fibers are structurally difficult to shed. The elastic power of cotton fibers does not allow cotton to self-condense during their storage, so the interstices and part of its inner volume are filled with air. These properties of seed cotton are used to cool and dry it when it is hot.

Pollutants are divided into inert and active types according to their adhesion to seed cotton. The passive or inert compounds are on the surface of the seeded cotton fibers and are easily separated from the seeded cotton when shaken lightly. Active compounds are difficult to separate from seeded cotton. In order to separate the active mixtures from the seeded cotton, it is necessary to first reduce the size to a passive state. Therefore, when

choosing cotton ginning equipment, it is necessary to pay attention to the nature of the compounds and how they adhere to the seed cotton.

When choosing the necessary types of equipment to separate various impurities from seeded cotton, it is necessary to take into account their physical and mechanical characteristics.

The cotton ginning machines consist of pile drum section and saw drum section. Small debris is best cleaned in the pile drum section, and large debris in the saw drum section.

Seed cotton cleaning equipment is characterized by productivity and cleaning efficiency (the ability to separate small, large and loose seeds from seed cotton). The cleaning efficiency of the equipment is determined as a percentage by the ratio of the mass of the mixture separated from the cotton entering the equipment to the mass of seeded cotton. The cleaning efficiency of the equipment is greatly influenced by their productivity, humidity and dirtiness of seed cotton. The performance of the equipment is adjusted to their highest cleaning efficiency. When the humidity of seeded cotton is reduced to a normal level, the efficiency of cleaning increases, and it becomes easier to separate dirty compounds from seeded cotton. When cleaning seeded cotton with higher than normal moisture level, in addition to the decrease in the cleaning efficiency of the equipment, additional defects in the fiber of this seeded cotton also increase. [3].

The porosity of the stored cotton is determined by the following formula in the calculation of K percentage:

$$K = 100(1 - \varrho_x g/ \gamma_x)$$

Here, **K** - is the porosity of cotton in this state %;
Yx - is the specific gravity of seeded cotton.

Pollutants are divided into inert and active types according to their compatibility with seed cotton (/vv.s.s/v). The passive or inert compounds are on the surface of the seeded cotton fibers and are easily separated from the seeded cotton when shaken lightly. Active compounds are difficult to separate from seeded cotton. In order to separate the active compounds from the seeded cotton, it is necessary to first make the die into a passive state. Therefore, when choosing cotton ginning equipment, it is necessary to pay attention to the nature of the mixture and how it adheres to the seed cotton [4].

Discussion and results.

Research object. One of the enterprises that started working in the direction of the cluster is the NT cluster MChJ enterprise “Turakurgan cotton cleaning plant” located in Turakurgan district of Namangan region. Samples of cotton fibers were taken to study the fouling properties of seeded cotton fibers.

100 g of dirty mixed cotton was taken from Andijan-35 selection grade 1 cotton on an analytical scale, and the content of dirty mixtures in cotton was determined by the following formula.

Table 1. Dirty compounds released during cotton cleaning types percentage share.

№	Denominate	Dirty mixtures gr. share
1.	Pieces of cotton	0.25
2.	Leaf	0.5
3.	Branches	0.10
4	Pelvic floor	0.50
5.	Flower petals	0.5
6.	Fruit bands	0.5

Method for determining the mass fraction of mineral and organic compounds:

$$S = \frac{100*M}{500}$$

Here, **M** is the percentage of impurities in the sample of the seed gr;

According to the results of scientific studies, 100 gr. while the content of impurities in cotton is 75 percent.

Summary. In the article, it was determined that the improvement of the quality of cotton fiber mainly depends on the technological process of the enterprise. It was determined that the quality indicators of cotton fiber change depending on the amount of impurities in the cotton fiber during the production process at cotton ginning enterprises.

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