# VINTLI KONVEYERDA TOZALANGAN PAXTA CHIGITINI MOMIQ SIFATI VA CHIGITNI MOYDORLIGIGA TA'SIRI

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**Annotatsiya** Ushbu ishda chigitlarni chiqindilardan tozalash jarayoni samaradorligini oshirish orqali olinadigon momiq sifati va chigitni yog'dorligini oshirish mumkinligi ko'rsatilgan.

**Kalit so'zlar**: Momiq sifati, chigit, vintli konveyer, chiqindilar, paxta tolasi,chang.

## ВЛИЯНИЕ ОБРАБОТКИ СЕМЯН ХЛОПЧАТНИКА НА ВИНТОВОМ КОНВЕЙЕРЕ НА КАЧЕСТВО ПУХА И МАСЛИЧНОСТЬ СЕМЯН

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**Абстрактный** В данной работе показано, что можно повысить качество получаемого пуха и масличность семян за счет повышения эффективности процесса очистки семян от отходов.

**Ключевые слова:** качество пуха, посевной материал, винтовой конвейер, отходы. сырой коттон, труба, вентиляторы

## EFFECT OF COTTON SEED TREATED ON A SCREW CONVEYOR ON FLUFF QUALITY AND SEED OIL CONTENT

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**Abstract** In this work, it is shown that it is possible to increase the quality of fluff obtained and the oil content of seed by increasing the efficiency of the process of cleaning the seed from waste.

**Key words:** Lint quality, seed, screw conveyor, waste, raw catton, pipe, fans.

**The main part**

It is known that in the technological process of processing cotton, it is important to improve the efficiency of cleaning it from waste. In this direction, a large amount of work has been done on the research of cotton raw materials and fiber cleaning process, and new and improved technological machines have been developed, and through their use, in general, the quality of products developed in the cotton cleaning industry has

been improved. the demand is satisfied.

At the same time, in our opinion, researchers have not given enough importance to the issues of cotton seed cleaning from waste before the technological process of linting. By increasing the efficiency of the seed cleaning process, it will be possible to increase the quality of fluff and the fat content of the seed, because a number of researchers have found that the quality indicators of fluff and seeds are directly related to the parameters of the seeds that are first processed.

Fluff quality depends not only on accumulated experience, contamination and damage level, but also on correct adjustment of linter machine technical condition. In addition to the parameters of the cotton seed coming into processing, the type and shape of the working surfaces of the technological machine also affect the quality of the produced product based on the experience and research conducted in the use of linters.

Lint pollution increases the number of fibrous skins formed in the index of impact of sawdust on the seed hull, as well as the mechanical transfer of waste from the seed to the lint. It is known that, in order to improve the quality of the obtained lint and reduce the amount of waste in it, according to specifications, the seeds are cleaned sequentially in pneumatic and mechanical cleaners before lintering.

It is known that after the technological process of linting, technical seeds are sent to the oil industry to obtain cottonseed oil. Contamination of cotton seeds entering the oil industry greatly affects the quality of the obtained oil and the amount of its output.

Therefore, here, cotton seed is forced to be further purified from organic and mineral additives using various methods and technological machines, spending a lot of money and time, because some oil-soluble substances in the waste during seed processing affect the quality of the obtained oil. sharply reduces, that is, the smell and taste that are not characteristic of oil are formed. As the color darkens to a certain extent, its acidity increases. Based on these theories, the screw conveyor has a mass of 5 kg. We transferred seeds from C-6524 cotton variety 3 varieties of seeds were used and each experiment was repeated 3 times. The seeds passed through the screw conveyor were lintered in a laboratory linter and lint was obtained. The conducted laboratory analyzes showed that such fluffs are of high quality and meet the requirements of the relevant standard. After that, the seed samples were sent for analysis in order to determine their fertility. That is, it was done with the help of NMR (nuclear magnetic resonance) device and the obtained results are given in the table below.

**The influence of seed contamination on flour fertility**

| Seed variety | The number of passes through the | Seed impurity, % | Seed moisture, % | Moisture content, % |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| | cleaning screw conveyor | | | |
| C6524 3-Sort | - | 9.8 | 7.1 | 19.43 |
| | 1 times | 3 | 7.1 | 21.02 |
| | 2 times | 1.2 | 7.1 | 21.30 |
| | 3 times | 0.6 | 7.1 | 21.70 |

The results presented in the table show that if the amount of waste in the initial cotton seeds is 9.8%, the seed contamination is 3.0% when the screw conveyor is passed through the experimental setup once. That is, the amount of waste is reduced by more than 3 times. If the cotton seed is passed through the screw conveyor 2 times, in this case, the amount of waste in the seed is reduced by 1.2%, that is, this reduction is more than 7 times compared to the initial state. Such a sharp reduction in the amount of waste in the cotton seed leads to an improvement in the quality of the lint obtained.

The effectiveness of the proposed screw conveyor with the cleaning part is also shown by the indicators of the oiliness of the seeds. For example, if the amount of unprocessed cotton seeds on the screw conveyor is 19.43%, the moisture content of the cotton seeds that have been passed through the screw conveyor only once is 21.02%, while the moisture content of the cotton seeds that have been passed through the screw conveyor 3 times is 21.70%. That is, the oil content increases to 11.8%, and as a result, great economic efficiency is observed in the oil industry.

**Summary**

It can be concluded that in order to ensure the production of cotton wool and cotton oil with the required quality indicators, it is recommended to combine the technological process of cotton seed transportation on a screw conveyor with the technological process of cleaning it from waste.

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