

**OPPORTUNITIES FOR PRODUCING SECONDARY PRODUCTS FROM
COTTON RAW MATERIAL WASTE**

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Annotatsiya. Ushbu maqolada to'qimachilik sanoatida paxta xomashyosini qayta ishlash jarrayonida vujudga keladigan chiqindilardan ikkilamchi mahsulotlar olgan holda korxonada chiqadigan chiqindilar miqdorini kamaytirish va korxonada iqtisodiy holatini yaxshilash.

Аннотация. В данной статье рассматривается использование вторичных продуктов из отходов, образующихся при переработке хлопкового сырья в текстильной промышленности, с целью сокращения количества отходов на предприятии и улучшения его экономического положения.

Annotation. This article discusses the use of secondary products from the waste generated during the processing of cotton raw materials in the textile industry to reduce the amount of waste generated in the enterprise and improve the economic condition of the enterprise.

Kalit so'zlar: paxta xomashyosi, chiqindilar, ikkilamchi mahsulotlar, tola, yigiruv, to'quv, mato, texnologik jarayon.

Ключевые слова: хлопковое сырье, отходы, вторичные продукты, волокно, прядение, ткачество, ткань, технологический процесс.

Keywords: cotton raw material, waste, secondary products, fiber, spinning, weaving, fabric, technological process.

Introduction.

In our country, comprehensive measures are being implemented to develop the cotton growing sector, modernize and technically re-equip cotton ginning enterprises, increase the profitability of production and processing of cotton raw materials, as well as the competitiveness of manufactured products, including: Decree of the President of the Republic of Uzbekistan No. PF-60 dated January 28, 2022 "On the Development Strategy of Uzbekistan for 2022-2026", which sets the task of "ensuring the stability of the national economy and continuing the industrial policy in the new domestic product, increasing the volume of industrial products by 1.4 times, while increasing the volume of textile industry products by 2 times"

The cotton industry is one of the leading industries in Uzbekistan and many other countries. Cotton fibers are widely used in the production of clothing, fabrics, and technical products. However, these processes also generate a lot of waste. The amount of cotton waste is very large, sometimes making up 20-25% of the total raw material. If these wastes are not used, the

damage they cause will lead to negative economic and environmental consequences. Therefore, the issue of producing secondary products from cotton waste based on a technological approach is of great importance. This article provides detailed information about the types of cotton waste, methods of their processing and the resulting products.

Types of cotton fiber waste

Waste in the cotton industry can be divided into several groups:

- Primary processing waste – cotton leaves, stalk pieces, seed husks, sand and other foreign impurities.

- Spinning mill waste – yarn ends, small fibers, clippings and dust.

- Weaving mill waste – incorrectly woven fabrics, pieces resulting from yarn breaks.

- Dyeing and finishing process waste – fabrics that have not absorbed dye, excess dye.

- Finished product production waste – fabric scraps, poor quality and substandard products.

Each type of waste requires a separate processing technology.

Waste from the cleaning and spinning process

During the initial processing of cotton, various foreign impurities are added to the fiber. These wastes are separated in special machines. Leaf and stem fragments can be used as feed, compost or fuel. Seed husks are important as an additional raw material in the oil industry.

In the spinning workshop, part of the fibers becomes waste during the spinning process. These include yarn ends, uneven fibers and dust. By processing them, it is possible to obtain cotton, technical fibers and even new yarn mixtures

Waste generated in textile production

A large number of yarn ends and clippings are generated during the fabric production process. This waste is often thrown away. However, they can be collected, re-separated into small fibers and used in the production of technical fabrics. Also, packaging bags, household items and other products are produced from waste fabrics. This approach not only reduces waste, but also increases economic efficiency.

Use of cotton dust and fine fibers

The most common type of cotton waste is dust and fine fibers. They rise into the air in production workshops and have a negative impact on the health of workers. Therefore, it is very important to collect and use this waste. Technologically, dust and fine fibers can be converted into materials for thermal insulation. In addition, they are used in the production of filters, coatings and other technical products.

Possibilities for obtaining technical fibers

Cotton waste plays an important role in the production of technical fibers. They are used to make fabrics for the automotive industry, packaging materials, and various household products. Cotton waste is often mixed with other fibers. As a result, materials with high durability are produced.

Production of wood substitutes

Today, we are faced with the problem of wood shortage. Therefore, the technology of producing building materials such as pressed boards, MDF, HDF from cotton waste is widely used. These materials are cheap, durable, and environmentally friendly, and are widely used in the construction and furniture industries.

Use of waste in paper production

Due to the high cellulose content of cotton waste, they are a very convenient raw material for paper production. In particular, high-quality writing papers, technical papers, and special

filter papers are made from cotton waste. This technology is considered one of the most effective ways of processing.

Production of building materials

Various products used in construction can be obtained from cotton waste. For example, they can be used in the production of thermal insulation materials, lightweight concrete and even bricks. These materials meet market demand because they are cheap and environmentally friendly.

Application in the chemical industry

In the chemical industry, cellulose, artificial fibers, plastics and various polymers are produced from cotton waste. In addition, there is a possibility of using them in the production of bioethanol, bioplastics and other environmentally friendly products.

Use of waste as an energy source

The technology of producing biofuels and biogas from cotton waste is also widely developing. Using special pressing equipment, waste is converted into briquettes and granules. They are used as fuel. This not only reduces waste, but is also useful as an alternative energy source.

Economic and environmental efficiency

The production of secondary products from waste has a double effect. First, enterprises receive additional income from waste and reduce costs. Second, waste is not dumped into the environment and the ecological balance is maintained. In addition, new jobs are created and resources are used rationally.

Conclusion

In conclusion, the technology for producing secondary products from cotton waste has great prospects for the industry. Each type of waste can be processed in a certain technological process and turned into a valuable product. This not only provides economic benefits, but also ensures environmental safety. Therefore, the establishment of waste-free production in the cotton industry is one of the urgent tasks in the future.

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