ISSN: 2350-0328

International Journal of AdvancedResearch in Science, Engineering and Technology

Vol. 6, Issue 5, May 2019

# Change of Quantity of Weed Impurities and Qualities by Bunt Layers

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**ABSTRACT**: In this article, in laboratory conditions, the contents of blemishes and weed impurities of cotton fiber breeding varieties An Bayaut, zoned in Jizzakh and selected from the upper, middle and lower layers of the riot, are determined.

**KEY WORDS***:* raw material cost, cotton fiber moisture, raw cotton, combined flagella

## I.INTRODUCTION

At present, our Republic is equipped with state-of-the-art type of equipment at the ginning factories, with the ability to maximize the degree of cleaning. But for the implementation of the processing of raw materials on the respective equipment of great importance is the proper storage of cotton in riots.

With the deterioration of cotton fiber grade, the content of defects and weed impurities increases, firstly, due to immature fibers, secondly, with a decrease in moisture content, the quantitative content of fibers with a skin, broken or damaged seeds increases.

With a decrease in the purity class of cotton fiber, the cost of raw materials decreases. If there is a number of defects and weed impurities above the established regulatory indicators given in the standards, it leads to a deterioration in the quality indicators of the fibers and, accordingly, negatively affect the physical and mechanical indicators of the yarn produced from them. According to the State Standard for the content of vices and weed impurities, cotton fiber is divided into the classes “Higher”, “Good”, “Medium”, “Normal”, “Weedy” and in accordance with this the cost of raw materials is established.

When pressing cotton fiber with high density, under the influence of compression and microorganisms, humidity increases. As a result, the quantitative content of blemishes and trash is increasing. For example, if the cotton fiber moisture content in the riots exceeds the established standard values, after the primary fiber treatment, the quantitative content of flagella and combined flagella increases, and the increase in pressure causes an increase in broken, damaged seeds and skins with fiber. All this leads to a deterioration in the quality characteristics of finished products produced from such raw materials.

For example, long-term storage of raw cotton with high humidity in riots leads to yellowing of the fiber, deterioration of the quality characteristics and in some cases leads to spontaneous combustion. For this reason, raw cotton, which does not meet its statutory requirements, is firstly processed. From the bottom layer of raw cotton riot open underground passages.

When storing accepted raw cotton by cotton ginning enterprises, the height of the riot is selected taking into account the grade, class and moisture content of cotton fiber. When the moisture of raw cotton is higher than the standard indicators specified in the standard, the raw materials in the drying and cleaning workshop are dried and sent for primary processing to a cotton gin plant.

Along with this, if raw cotton taken from farms is not compacted enough in cotton ginning enterprises during riots, the corners are incorrectly positioned, or the permissible amount of raw cotton is exceeded during rebellion, which leads to insufficient rebellion stability.

With a normalized moisture value of cotton fiber after 8-10 days, if the moisture content is exceeded after 3-5 days, a tunnel is broken through.

ISSN: 2350-0328
International Journal of AdvancedResearch in Science, Engineering and Technology
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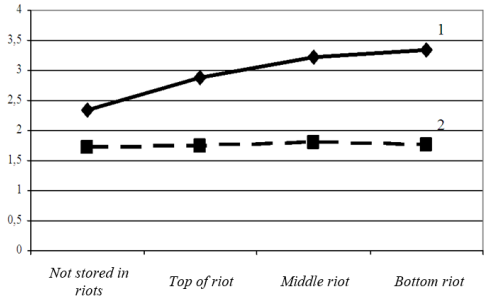
At the cotton ginning factory, the effect of the content of blemishes and trash impurities on the course of technological processes was studied from selected from different layers of raw cotton riots and the results of the tests are shown in Table 1.

**Table 1**
**The change in the content of defects and trash in the composition of cotton fiber, depending on the layer of riot**

| № | Indicators | Unclaimed cotton fiber | Layers of riot | | |
|---|---|---|---|---|---|
| | | | Upper | Average | Lower |
| 1. | the total number of defects and trash in the composition of cotton fiber, % | 2,34 | 2,88 | 3,22 | 3,35 |
| 2. | flagella | - | 0,02 | 0,04 | 0,08 |
| 3. | combined flagella | - | 0,06 | 0,10 | 0,14 |
| 4. | number of broken or damaged seeds | 0,24 | 0,38 | 0,46 | 0,54 |
| 5. | immature fiber plastics | 0,08 | 0,10 | 0,14 | 0,11 |
| 6. | **peel with fiber** | 0,22 | 0,40 | 0,48 | 0,56 |
| 7. | **nodules** | 0,08 | 0,17 | 0,20 | 0,16 |
| 8. | **trash** | 1,72 | 1,75 | 1,80 | 1,76 |

According to the results of the tests, Figures 1-2 show the graphs of changes in the influence of layers of revolt and technological processes on the quantitative content of defects and trash, flagella, combined flagella, broken and damaged seeds, skins with fiber and trash.




*1 is the total number of defects;*
*2 - the amount of trash.*
*Fig.1 Change in the total number of defects and weed impurities in the composition of cotton fiber*


*1- the number of damaged and broken seeds;*
*2 - the amount of skin with fiber.*
*Fig.2. Change the number of damaged and broken seeds*

When comparing the obtained test results on the content of defects and weed impurities of rebel and non-rebel cotton fiber, the total quantitative content of defects and weed impurities from the top layer is 17.7%, the number of damaged and broken seeds is 36.8%, the skin with fiber is 45, 0%, the amount of weed impurities by 2.2%, the total quantitative content of defects and weed impurities from the middle layer by 27.3%, the number of damaged and broken seeds by 36.8%, the skin with fiber by 47.2%, the skin with fiber by 54.2%, weed impurities by 4.6%, the total quantitative vices content and trash from the lower layer to 30.2%, the number of broken and damaged seeds by 55.6%, the fiber peel 60.7%, trash content increased by 2.3%.

The test results show that with an increase in the rebellion density, a compression deformation is observed, resulting in an increase in the content of damaged and broken seeds, flagella and combined flagella, skin with fiber, which leads to an increase in the total content of defects and trash in the composition of cotton fiber. In addition, as a result of compressive deformation, which the seed experiences in the lower layer of the riot, due to the increase in the pressure force, which leads to an increase in humidity in the inner layer of the seed, during drying at a high temperature, drying the outer layer of the seed contributes to an increase in the stiffness of the upper part of the seed. inside the seed does

ISSN: 2350-0328
International Journal of AdvancedResearch in Science, Engineering and Technology
Vol. 6, Issue 5, May 2019

not have time to go out, as a result, the compression deformation increases, which in the process of cleaning and ginning causes damage to the seeds or causes an increase in the skin with the fiber.
From the analysis of the experimental data, it can be seen that with an increase in the rebellion density, the total content of defects and trash increases from 17.7% to 30.2%, the content of damaged and broken seeds from 36.8% to 55.6%, the amount of skin from fiber from 45.0% to 60.7%, the content of trash from 2.2% to 2.3% increase.

## II. CONCLUSION AND FUTURE WORK

1. From the analysis of the experimental data, it can be seen that with an increase in the rebellion density, the total content of defects and trash increases from 17.7% to 30.2%, the content of damaged and broken seeds from 36.8% to 55.6%, skins with fiber from 45.0% to 60.7%, the content of trash from 2.2% to 2.3% increase.
2. For the development of quality products from cotton fiber, it is recommended not to store cotton fibers in riots.

## REFERENCES

1. M.T.Xodjiyev. Osnovi protsessa uplotneniya xlopka-sirsa. Tashkent, Fan, 1996, 156 s.
2. G‘.J.Jabborov. Chigitli paxtani ishlash texnologiyasi. «O‘qituvchi», Toshkent, 1987.
3. G.I.Miroshnichenko. Osnovi proyektirovaniya mashin pervichnoy obrabotki xlopka. M.: Mashinostroyeniye, 1972, s.63-65.