RULES FOR STORING COTTON AND DETERMINING ITS QUALITY DURING STORAGE

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Abstract: Currently, 80-85% of raw cotton grown in our republic is high-grade cotton. This, in turn, is one of the urgent issues of keeping high-grade cotton with natural quality indicators, drying and cleaning using special modern low-energy techniques. This article talks about the effect of temperature changes on the quality of raw cotton during storage.

Key words: Fiber, lint, light industry, export, construction, drying, regenerators.

INTRODUCTION.

For normal growth and development of fine-fiber cotton varieties, including seed germination, the most favorable temperature is 25-30 degrees. Cotton development slows down at a temperature below 20°. A decrease in temperature has a negative effect on the development of cotton, and this is noticeable. When the temperature drops to 17 °C, the development of the plant becomes extremely slow. Cotton varieties with thin fibers are somewhat more resistant to cold, some varieties can easily withstand -5°, -7° or even -10° cold in a short period of time. Despite the fact that fine fiber cotton varieties are resistant to drought and the root system grows strongly and penetrates deep into the soil, it grows well and produces abundant branches only when it is provided with sufficient water. , that is, gathers an abundant harvest. During the flowering period of cotton, its absolute water consumption rises to a high level, because during this period the plant grows strongly and a very large evaporation level occurs in it. In addition, during the flowering period, the temperature and dryness of the air around the cotton reaches a high level.

During the ripening period, the water consumption of fine fiber cotton varieties decreases gradually. This is due to the fact that the life activity of cotton, including the slowing down of the growth process, partial shedding of leaves on plants, ripening of some bolls, a decrease in the overall level of cotton, and during this period, the air temperature slightly decreases and humidity slightly increases. depends. The daily amount of water used for transpiration during the ripening period of cotton is about 30-40 m3 per hectare, and about 5000-6000 m^3 during the entire growth period.

MAIN PARTS AND RESULTS.

If the fine fiber cotton varieties stored in the warehouses are higher than the temperature indicated in the first measurement or if it rises 20-30 after the initial measurements at certain points, it is necessary to suck moist air from the warehouses and increase the temperature of the cotton. immediate action must be taken on forced cooling. Air intake is carried out through a tunnel. The width of the tunnel should not be more than 0.8-1 m, and the height should not be more than 1.8-2 m. A special UVP installation is used for air intake. In order for the color of the cotton not to deteriorate and to be white after storage, the period of preventive ventilation should not exceed 8 hours. If air extraction from the stored

cotton is carried out at the specified time, the health quality of this cotton will not be damaged for 5-6 hours.

The quality of fine fiber cotton delivered to cotton preparation points is carried out in accordance with UzSTD 615-94 standards, cotton is divided into grades depending on the degree of contamination. The light should be at least 300 lux when determining the appearance of fine fiber cotton varieties. There are 2 ways to receive fine fiber cotton varieties in factories. It is accepted depending on the organoleptic and maturity of the fiber. During storage, thin-fiber cotton varieties are stored in warehouses and closed warehouses, when cotton is placed in closed storage areas, the average density should be as follows, 150-190 kg/m3 with moisture content up to 11% for I and II industrial varieties, low industrial varieties 130-160 kg/m3 with moisture up to 14 %.

It is better to carry out night drawing of fine fiber cotton varieties only on days when the air temperature is higher than 30^0. When the relative humidity of the air is higher than 80%, preventive measures are not carried out. As a result of placing wet cotton in the baskets and not drawing air in time, the cotton starts to heat up on its own. As a result, the color of the fiber changes, the variety decreases, and the quality of the seed decreases sharply. Therefore, it is necessary to check stored I and II cotton every 10 days, and III-IV-V cotton every 5 days.

In order to determine the temperature of thin fiber cotton varieties stored in the warehouses, the thermoscope is located at 8 points of the warehouse at a depth of 3 m; in closed warehouses, and in sheds, it is measured from 4 points, adding up to half of the height of the gharam. Cotton temperature is considered normal if it is higher than 250 on hot days. When raking, it is necessary to start compacting cotton 2.5-3 m wide at least 0.5 m from the edge of the raking. In order to prevent warping, deformation, and cracks, the cotton must be sanded when it is 0.8-1 m thick. A 1.5-2 m tarpaulin is placed around the gin area to prevent spilled cotton from being polluted, 50-60 tons of cotton should be placed in 5 gins in one day, and one gin should be placed and ready within 10 days. . 8.5-7 m tarpaulins are used to protect thin-fiber cotton varieties stored in open areas from rain and moisture.

Table 1

Periods of drawing air from cotton stored in warehouses

Cotton moisture %	**Time to draw air**			**Relative humidity % (max.)**
	How many days after the first seizure	How many days will pass the second time	How many days will pass after that?	
When storing I-II grade cotton				
12-14 %	7-10 days	10 days	15 days	75%
14-16 %	5-8 days	8 days	12 days	80%
16-18 %	5 days	5 days	8 days	85%

When storing cotton grade III-IV-V				
14-16 %	7-10 days	10 days	15 days	75%
16-18 %	5-8 days	8 days	10 days	85%
18-20 %	3-5 days	5 days	8 days	90%
20 % .	3-4 days	5 days	7 days	95%

In order to keep cotton in good condition for a long time and to get quality fiber from it, it is necessary to collect it according to its variety and grade as shown.

Taking into account the type, class and moisture content of cotton in cotton harvesting, it should not exceed that indicated in Table 16.

Cotton with a moisture content of 20-22% is placed near the drying and cleaning department and is dried and sent to the cotton gin for processing.

Taking into account the processing of the drying-cleaning department in the preparation area of the cotton ginning enterprise, discharge cotton with a moisture content of up to 14% to the area of the cleaning department, and cotton with a moisture content of more than 14% to the area of the drying and cleaning department is appropriate.

The laboratory of the cotton factory and processing center checks the condition of I-II varieties of cotton every 10 days, and the condition of III-V varieties every 5 days.

If the cotton is stored in an unsatisfactory condition in the processing facility, the head of the processing facility and the classifier will take measures to eliminate the identified deficiencies.

The laboratory organizes control over the placement and storage of cotton in warehouses and warehouses until the cotton is sent to the ginning plant. In order to timely identify areas with high humidity of cotton in the warehouses, the laboratory of the preparation site checks the temperature of the stored cotton with the Tshch-01 electronic temperature meter in the following periods.

Average one-day moisture content of I and II grade cotton is 9-13 percent, III, IV and V cotton grades are checked every five days in bunches whose moisture content does not exceed 15-17 percent, and in bunches with high moisture content every three days.

References:

1.Ungarov, A., & Xolmatova, O. (2024). PAXTA MOMIG ‘INI CHIGITIDAN AJRATISH USKUNALARI KONSTRUKSIYASINI TAKOMILLASHTIRISH. Инновационные исследования в современном мире: теория и практика, 3(4), 53-55.

2.Унгаров, А., & Жўрабоев, И. (2024). PAXTA TOZALASH KORXONALARIDA CHIGITNI SAMARALI LINTERLASH TEXNOLOGIYASI TAHLILI. Евразийский журнал академических исследований, 4(4), 125-128.

3.Қабулов И., Юлдошева Д., Унгаров А. ПАХТАНИ ЕТИШТИРИШ АГРОТЕХНИКАСИ, ТЕРИМГА ТАЙЁРЛАШНИ ТАШКИЛЛАШТИРИШ ТАРТИБИ //Евразийский журнал академических исследований. – 2024. – Т. 4. – №. 1 Part 2. – С. 88-92.

4.Ungarov A., Yuldasheva D. EFFECT OF TEMPERATURE CHANGES ON FIBER QUALITY DURING STORAGE OF COTTON RAW MATERIALS //Journal of Agriculture & Horticulture. – 2024. – Т. 4. – №. 1. – С. 17-20.

5.Ungarov A., Xudayberdiev R. IMPROVING INFRARED DRYING OF AGRICULTURAL PRODUCTS //Евразийский журнал академических исследований. – 2023. – Т. 3. – №. 12 Part 2. – С. 230-233.
6.Ungarov A., To‘raqulova O. QISHLOQ XO ‘JALIGI MAXSULOTLARINI INFRA QIZIL NURLARI YORDAMIDA QURITISHNI TAKOMILLASHTIRISH //Евразийский журнал технологий и инноваций. – 2023. – Т. 1. – №. 10. – С. 38-40.
7.Khujakulov F. et al. The dependence of grape feeding on the productivity indicator and harvest quality of rizamat and large dry varieties. – 2023.
8.Qurbanov E. et al. AGRAR SOHADA RESURSLARDAN SAMARALI FOYDALANISH TEXNOLOGIYALARI TAHLILI //Евразийский журнал технологий и инноваций. – 2023. – Т. 1. – №. 6. – С. 143-146.
9.Qabulov I., Maxmudov I. COTTON RECEIVING RULES IN COTTON MILLS AND COTTON RECEIVING PLACES //Евразийский журнал академических исследований. – 2024. – Т. 4. – №. 1 Part 2. – С. 93-96.
10. Qabulov I., Yuldosheva D. DETERMINATION OF IMPURITY AND MOISTURE OF RECEIVED COTTON AND CONTROL OF THE QUALITY OF COTTON STORED AT THE PREPARATION POINT //International Bulletin of Applied Science and Technology. – 2023. – Т. 3. – №. 6. – С. 745-748.
11. Ermamat, Qurbonov, Xudoyberdiyev Ikrom, and Yuldasheva Dilorom. "TECHNOLOGIES AND TECHNICAL TOOLS USED IN PREPARING LAND FOR PLANTING ANALYSIS." American Journal Of Agriculture And Horticulture Innovations 4.03 (2024): 21-24.
12.Xudoyberdiyev, I., Qurbonov, E., & Yuldasheva, D. (2024). THE IMPORTANCE OF LEVELING AND DENSIFICATION BEFORE SOWING SEEDS OF CROPS AND AGROTECHNICAL REQUIREMENTS FOR IT. Евразийский журнал академических исследований, 4(4), 40-43.
13.Adhamov, A., Ungarov, A., & Jo‘lbekov, I. (2023). PROSPECTS OF USE OF INNOVATIVE TECHNOLOGIES IN AGRICULTURAL SECTOR DEVELOPMENT. Journal of Agriculture & Horticulture, 3(4), 13-15.