SOME FEATURES OF RECEPTION AND STORAGE OF COTTON SEEDS

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ANNOTATION

Storage of seeds and seed products requires both special care and control. During storage, the quality of seeds is affected by a complex of environmental factors: humidity, temperature, gas exchange, the composition of the atmosphere of the storage or packaging, the nature of the seed covers, the degree of maturity, microflora. The factors limiting the storage duration of viable seeds are, first of all, temperature and humidity. Typically, the lower the temperature and the lower the moisture content in the storage, the longer the seeds will viable.

Key words: seed, cotton, fiber, ripening time, drying, raw cotton, dryer, burat, sample.

Cotton is the main spinning plant. It provides about 3/4 of all vegetable spinning raw materials for the industry. Various cotton fabrics and a number of other very important industrial products are made from the fiber. Oil and other food and technical products are produced from seeds. Cotton plant is one of the best melliferous plants.

Cotton is cultivated in more than 50 countries. The zone of modern industrial cotton growing covers the tropical, subtropical and temperate zones up to 48 ° N. sh. Currently, Uzbekistan, Tajikistan, Turkmenistan, Kyrgyzstan and southern regions of Kazakhstan, as well as Azerbaijan and Armenia are engaged in cotton growing.

Cotton fiber production is concentrated mainly in the USA, Central Asia, China, India, Mexico, Brazil and some other countries.

All parts of the plant contain a wide range of biologically active substances. The roots and leaves contain gossypol, tannins, ascorbic acid, vitamin K, trimethylamine, essential oil, high-quality protein, flavonoids (5% in flowers), citric (5-7%), malic (3-4%) acids, pigments , pectins, sterols, and polyhydric alcohol. Carotenoids and catechins are found in all parts of plants [10] /

The composition of cotton seeds contains fatty oil, phytin, protein, phosphatides, sterols, starch, coloring pigments, gossypol and vitamins: B6, B2, thiamine, folic acid, provitamin A, E. Currently, cotton fiber is most often used in the world textile industry. industry.

Harvested from the fields, raw cotton (seeds covered with fibers) goes to ginneries for primary processing. In addition to fibers, the cotton mass contains various weeds, the presence of which reduces the quality of cotton. Their quantity depends mainly on the method of harvesting raw cotton, its primary processing, as well as on the variety of cotton and the conditions of its growth.

In the process of primary processing in cotton ginning plants, using the so-called grain separating machines, the following are sequentially separated from the seeds:

- cotton fiber (fibers generally longer than 20 mm);
- down or lint (fibers less than 20 mm long);
- underfloor or delint (short fibrous cover less than 5 mm long).

The share of cotton fiber accounts for about 1/3 of the total weight of raw cotton. At the same time, there is a cleaning of impurities (particles of leaves, capsules, stems).

For preliminary cleaning of cotton seeds from impurities, machines called burat are used.

Usually, seeds are dried with a mixture of air and flue gases in mine-type dryers (VTI, DSP). The dried seeds are cooled in a cooling chamber by blowing atmospheric air through them. To reduce undesirable changes in seeds during heat exposure, a two-stage drying is used.

Cotton seeds are stored in cotton-processing organizations, in specially designated storage facilities, which ensure complete safety of seeds from damage and contamination by other crops and varieties.

The main way of storing seeds is bulk storage. The advantages of this method are as follows: the area and volume of the granary are used more fully; there are more opportunities for mechanized movement of seed masses; it is more convenient to organize monitoring of the quality of seeds; the costs of packaging and transferring products disappear.

Seed masses must be systematically monitored during the entire storage period. This follows from the variety of physiological and physical phenomena observed in the seed mass. In the absence of sufficient control over them, measures may be taken untimely to eliminate undesirable processes, which will lead to significant losses in weight and a decrease in quality.

Well-organized monitoring of the stored seed mass and skillful correct analysis of the obtained observation data allow timely prevention of all undesirable phenomena and with minimal costs bring the seed mass to the state of conservation or sell it without losses.

The layers of seed mass located at a distance of 30-50 cm from the warehouse floor and 30-75 cm from the surface of the embankment are especially carefully controlled. As is known, it is in these layers that horizontal layer-by-layer self-heating of seeds (upstream and downstream) most often occurs. For the same reason, much attention is paid to the areas of the seed mass located along the walls of the warehouse.

When observing the state of the stored lots of high-quality, seed grain, their germination and germination energy must be checked - at least once every two months. These indicators indicate the state of any grain mass during storage, but are especially taken into account for the characteristics of batches of seed grain. The observation results for all indicators in chronological order are recorded in the observation log and stacking label separately for each batch. This procedure allows you to analyze the state of batches, control the correct organization of their storage at the enterprise and take timely measures of the technological order (cooling, disinfection, drying, cleaning, etc.). The organization and technique of monitoring grain masses during storage should be carried out in accordance with the current instructions. The methodology for determining individual indicators of grain and seed quality is set out in the standards.

Conclusion: Cotton is a valuable spinning crop. Its fiber is used for the production of various fabrics - chintz, cambric, marquise, knitwear, as well as for the production of threads, cord, celluloid, photographic film, valuable grades of paper. Cotton seeds are also prized as they are an oilseed crop. In order to obtain high-quality oil, cotton seeds must be subjected to thorough post-harvest processing and strictly follow the technologies of storage conditions. The cheapest storage mode for seeds is dry storage. It consists in the following - at a humidity below the critical value, the seeds are in a state of incomplete suspended animation, and all the moisture in them is bound. Microorganisms are not viable under these conditions. Dry storage can be carried out in warehouses and elevators. Cold storage is also an inexpensive and effective mode. It is carried out at low temperatures, since at temperatures below 10 ° C there is a strong weakening of the vital activity of seeds, both the main crop and impurities, microorganisms, insects, mites .. For cooling, atmospheric air is used in the cold season and artificially cooled atmospheric air - in warm time. More expensive storage modes include chemical preservation. It is used to stabilize the quality of seeds during storage and to combat various pests. With this method, the inter-seed space is filled with vapors of substances that have a toxic effect on pests and microflora.

For all storage modes, a bulk (elevator) method of storing seeds is suitable, but they are also stored in containers - in the case of storing seeds of the highest grade. Subject to all technical regulations, seed storage takes place with minimal loss of quality raw materials.

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