

ANALYSIS OF THE PROCESS OF PREPARING SEEDS FOR SOWING

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Abstract. *The article presents an analysis of the stages of preparing seeds for planting, and determines the quality of seeds, their biological properties, viability, growth potential, and germination characteristics.*

Key words . *Seed , shell , germination , moisture , dirt , mechanical damaged , hairy , residue fiber content .*

A seed is a living organism capable of respiring, disease, reproduction, and significant exposure to weather changes. It consists of a shell and a kernel that differ in chemical properties, biological indicators, and structure [1, 2, 3, 4].

The shell - the outer layer of the seed - protects it from the negative effects of the external environment. In terms of structure and chemical properties, it is close to wood. The kernel of the seed consists of the bran and endosperm, and makes up 60% of the weight of the ripe seed. It is raw fat , protein, fiber , ash and nitrogen-free from substances consists of .

Village at the farm face coming main from problems one this of seeds one It's not the same .

It is known that every how village farm of crops seeds , that including cotton sprout process one flat happened It won't be . This is a row genetic and biochemical to the reasons It depends . Therefore for , the bush on each branch located cotton seeds size , shape and with mass of seeds main from the part difference does .

By genetic scientists held many research this showed that the most valuable seed each how of a bush The middle part will be . They this of the plant development and growth high quality indicators providing feed articles , as well as chemical to substances to [5] .

In field conditions, seed germination usually does not exceed 60-65%, therefore, increasing it to 80-85% will create the basis for providing each irrigated hectare with full seedlings, which in turn will increase cotton yields when provided with appropriate agronomic practices [6] .

The following problems can be solved by cleaning and sorting seeds:

1. Removing impurities from seed material and obtaining clean seeds belonging to only one species in accordance with the norms established by state standards;
2. Improving the physical properties of seeds ;
3. Selecting only the highest yielding seeds for planting.

Seeds are separated by width using a round-hole sieve. Studies have shown that if the seeds are too long (length is 2 times the width), they cannot pass through the round holes of the sieve in a vertical position. Therefore, only chickpeas, buckwheat, millet, etc. are well separated by width.

Thickness according to seeds stretched holes was oh no using is separated . Such without , seeds horizontal vibrations with holes along while moving on the edge to be need and from that only later they from the lake to pass possible . Seeds thickness according to variability important information happened for , main from the harvest mixtures good separation possible .

Seeds in the selection often air flow is used , which them air in the flow to separate by mass opportunity Gives . Seeds when sorting in the air stream, many in terms of seed weight , surface to its nature , its hairiness , its fiber and seed air direction according to which towards looking at to stand related . Seeds sorted in the air stream separation one of time in itself other one row features with done is increased , this for modern sorting machines , seeds sorted by air flow , in a sieve, dimensions according to separation provides [7, 8, 9] .

This cleaning principle is successfully used in simple (fans) and complex seed cleaning machines for cleaning hairy seeds.

Getting a healthy plant from a seed depends on the sufficiency of nutrients in it, the viability of the seed coat and the degree of damage. The larger the geometric dimensions and mass of the seed, the more nutrients it contains. Mechanical damage to the shell reduces the viability of the seed. It is known that damage to the seed coat leads to a violation of the respiratory rhythm, self-heating and the appearance of microbes. All this leads to a decrease in the availability of nutrients, and as a result, to a decrease in germination properties.

The ability of seeds to germinate under favorable conditions is called germination.

Germination capacity is determined by the ability of a seed to germinate under favorable conditions, but germination in a short period of time depends on the energy produced by the seed.

Since the seed has a small amount of potential energy and the duration of germination depends on the intensity of the biochemical processes occurring in it, it is of great importance to know the duration and extension of germination. Thus, the more energy a seed produces in a short time, the faster it will germinate. Its energy is measured by the ratio of the number of germinated seeds to the total number of seeds in the sample . The germination force is the ability of the seed to overcome the resistance of the environment.

Based on the above, it can be concluded that the quality of the seed depends on its biological properties, viability, growth potential, germination, etc. [10, 11].

Currently, in Uzbekistan, mainly hairy and dehaired seeds are used for cotton cultivation. The quality indicators of seeds prepared for sowing must comply with the requirements of the standard UzDst 663:2017 “ Seed seeds. Technical conditions”.

Based on the results of the research, in 2005, new requirements for the quality indicators of seeds of the Republic of Uzbekistan were developed (Tables 1-2).

1-table

Requirements for varietal purity of seed

Seed generation	Grade purity at least,%
Super elite, Elite	100
R1	99
R2	98
R3	96

Seed must meet the standards given in Table 1.2 for seed germination, moisture content (mass fraction of moisture), impurities (mass fraction of mineral and organic impurities), hairiness, mechanical damage, and residual fiber content.

Table 1.2.

Requirements for the quality of seeds

Indicators	Rate , %		
	hairy seed for	less hairy seed for	Hairless seed for
Fertility , at least	90.0	90.0	90.0
Humidity (humidity) mass distribution), most with	10.0	10.0	10.0
Pollution (mineral and organic of impurities massive share), most with	0.7	0.5	0.3
Mechanical damaged , many with	7.0	8.0	8.0
Hairiness , lots of it with	-	2.5	0.5
Remainder fiber content , high with :			
- hairy seeds for	0.8		
- naturally depilated seeds for	0.4		

From Table 1.2 above, we can say that the impurity of hairy seeds prepared for sowing should not exceed 0.7%, based on this indicator, seed cleaning and sorting machines are used. To date, SPS and CHSA units have been used as hairy seed cleaning and sorting machines, and ChSA units are the most widely used in the Republic, because in addition to cleaning and sorting, they also perform vertical transportation from their location upwards. Therefore, it is important to improve the efficiency of sorting with high productivity based on the improvement of CHSA units.

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