

Ways to Improve the Environment

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ABSTRACT

The article presents the results of the study of the mass of 1000 peeled hairy seeds by fertilizing the soil and improving the ecological condition of the soil by coating the hairy seeds with organic fertilizers. While the weight of 1000 pieces of hairy seeds was 120.3 grams, the weight of 1000 pieces of shell hair seeds in the portable device was 130.1 grams, which is 9.8 grams more than the control.

KEYWORDS: portable shelling device, shelling, protective-feeding compounds, hairy seeds, 1000 seeds, mass, soil

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It is known that along with other agro-technical measures, the production of high-quality seeds plays an important role in increasing cotton yields and reducing the cost of crops grown. Because the germination of seeds in the field, the subsequent growth of cotton seedlings depends in many respects on the quality of the seeds being prepared.

At present, in order to improve the quality of seeds, they are sorted by mechanical, pneumatic, liquid and electric methods, treated by laser and directed sunlight, and processed in magnetic and electric fields [1]. All these methods improve the quality of seeds, but do not increase their viability.

If the seeds are scattered, it will be possible to sow them in low doses or in a clear nest. For example, low-hairy and dehydrated seeds are sown, so it is possible to sow them in a clear nest or at low rates. However, since these seeds do not have a natural means of protection, adverse weather conditions quickly affect them, and when planted early and the soil temperature is low and the humidity is high, seed

rot in the nests is observed. This leads to spontaneous germination and, in some cases, replanting.

Due to the peculiarities of the sowing season in the country, the main part of the land is planted with hairy seeds, which are a natural means of protection. Hairy seeds are resistant to inclement weather due to their natural preservative, but cannot be sown in clear nesting or in low doses due to poor scattering [2].

The reason for this is, firstly, the poor scattering of hairy seeds, and secondly, the lack of access to high-quality seeds in mechanical and pneumatic sorters currently used in agricultural production. With this in mind, farmers are forced to spend more than the norm to provide the required number of seedlings. As a result, thousands of tons of seeds, which can be obtained by consumer goods, are thrown into the ground and wasted. In addition, in order to ensure a normal number of seedlings, it is necessary to spend an additional 30 ... 40 people · hours / ha of manual labor per plantation [3].

With this in mind, the Scientific Research Institute of Agricultural Mechanization (KHMITI) has developed a set of technologies and techniques for coating with additional protective-nutrient compounds for planting at low rates, increasing the dispersion of hairy seeds [4].

But in recent years, as attitudes toward ownership in agriculture have changed, newly established farms have begun to require simpler, more energy-efficient, and resource-efficient devices. With this in mind, we have developed an energy-efficient, resource-efficient, and resource-efficient portable packaging device that can be used on farms [5]. This device is designed to coat hairy seeds with poor scattering with protective-nourishing compounds before planting, which can be used by several farms together or separately [6].

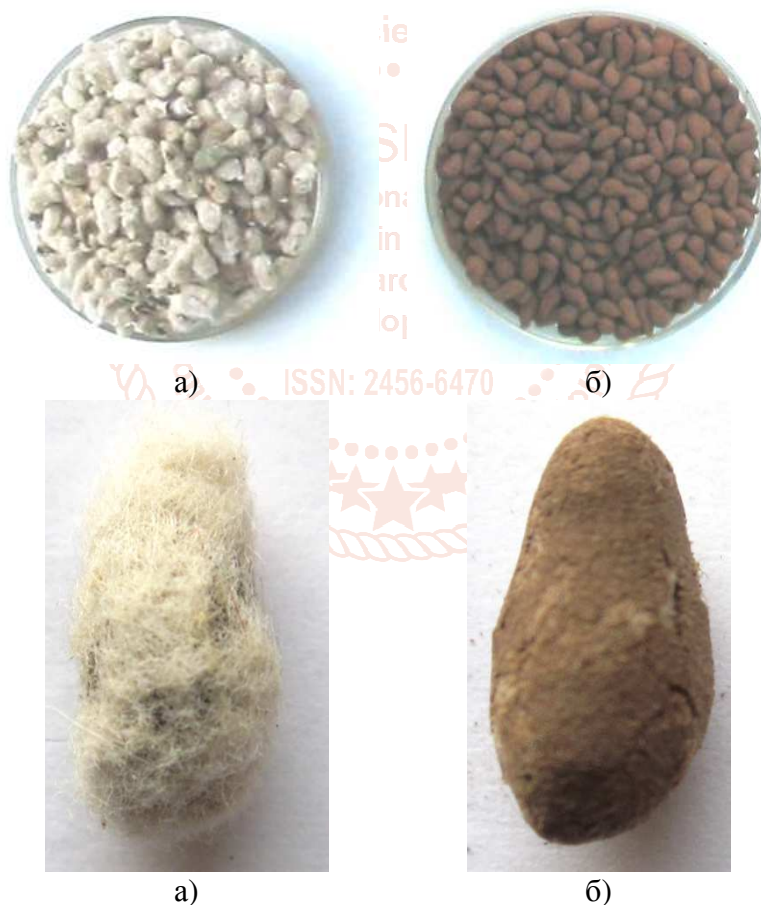
Hairy seeds prepared in a portable husking device are not moistened before sowing. As the chemicals

remain at the bottom of the shell layer, their spillage on the seeds is eliminated, improving the working conditions of the workers and the ecological situation in the soil.

In addition, when hairy seeds are prepared for sowing in a portable shelling device, it is possible to sow in small quantities or in a clear nest, as they become granular and flaky.

As a result of the husking technology, a 0.6-0.8% concentration of NaKMTs with water can be used as an adhesive mixture to form a husk layer on the surface of hairy seeds, and elements that have a positive effect on seed germination and growth can be used as stimulants. Ammophos, biohumus, lignin, supergumus, phosphogypsum and other agricultural wastes can be used as dry fillers.

The picture shows the seeds covered with a lignin ball through the shell technology in a hairy and portable shelling device.



Picture. Samples from hairy seeds

a) hairy seed pods; b) Seed coated with lignin ball by shell technology in a portable shelling device. The mass of 1000 pieces of shelled hairy seeds was studied on the basis of shelling technology in the above-mentioned portable shelling device.

The table shows the results of hairy and shelled seeds in a portable shelling device.

Table Results of the study of 1000 seed mass

T / r	Name of options	1000 seed mass, g	The standard deviation σ , g	Coefficient of variation V, %	Experimental accuracy P, %
1	Hairy seed pods	120,3	2,08	1,73	0,86
2	Peeled hairy seeds	130,1	0,40	0,27	0,19

The results of the table show that if the weight of 1000 pieces of hairy seeds was 120.3 grams, the weight of 1000 pieces of hairy seeds in the portable device was 130.1 grams, which is 9.8 grams more than the control. If we calculate this ratio in klograms, that is, if 1000 klograms of hairy seeds are peeled using agricultural waste, it is about 1081.5 klograms. As a result, about 81.5 kilograms of organic fertilizers are applied to the soil by shelling 1,000 kilograms of seeds using agricultural waste. This, in turn, will help to fertilize the soil with organic fertilizers over the years and improve the ecological condition of the soil.

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