

DEWINGING, SORTING AND PREPARATION FOR SOWING (PACKING) OF SAXAUL SEEDS

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Abstract. *The article provides information on the process of collecting ripe saxaul seeds, drying and sorting of their seeds, their removal from wood and drying. In particular, information is given on the processes of preparing saxaul seeds for planting, in particular, on the processes of dewinging and sorting seeds on special equipment, introducing them into an aqueous solution, drying and peeling, i.e. processing with clean soil in ordinary non-saline soft valleys (between ravines), storing cleaned seeds in temporary storage warehouses.*

Keywords: *Karakalpakstan, cultivated forests, saxaul, green cover, sandy desert, late September, seedlings with their own roots.*

Introduction

All plants of the dendroflora of the globe have their own characteristics of natural and artificial reproduction. Accordingly, in regions without the influence of anthropogenic factors, one can observe the processes of natural reproduction of plants, cases of reproduction by mature seeds based on shoots, rhizomes and other organs.

However, for the expansion of areas of natural and cultivated forests, a positive attitude of people towards natural forests is considered appropriate. It is well known that forests are a powerful means of maintaining ecological stress in the biosphere. The role of natural and cultivated forests in creating a favorable environment for human life is manifested not only in the areas of their growth, but also in the improvement of nearby cities and residential areas.

At present, during the rapid development of science and technology throughout the world, natural water and plant resources are increasingly being used for economic purposes. This situation is the reason for the reduction of water supplies, the rapid reduction of areas occupied by forests, the expansion of deserts, and the increase in the average temperature of the earth's air. In such conditions, the efficient, rational, productive use of forest resources based on the recommendations of science, on the basis of the general laws of nature and the proper provision of its protection are among the tasks of the first degree of the modern era.

Therefore, it will be possible to grow green spaces in the regions on the basis of existing adapted natural and cultivated plants of the Aral Sea region from seeds or seedlings with their own roots, according to their biology. Xerophytic plants such as saxaul, cherkez, kandym, dzhida, of course, can be used on lands where the ameliorative state of the Aral region has deteriorated greatly. [3].

Research methods

The studies were carried out in field and laboratory conditions, using reforestation methods. According to the indicators of the recommendations "On the creation of forest plantations on the dried bottom of the Aral Sea" and "On the acceleration of the formation of vegetation by supporting the natural regeneration of the forest from seeds in the conditions of the dry bottom of the Aral Sea", in accordance with the requirements of TECHNICAL CONDITIONS GOST 13855-87 "Fruits sand-reinforcing tree species, sowing qualities" [1, 2].

RESEARCH RESULTS AND DISCUSSION

Accordingly, it is advisable to use the Chenopodiaceae family, which belongs to the group of plants, which are forest-forming ones, growing in sandy deserts.

The Chenopodiaceae family, which is part of this group, mainly includes 2 important genera - saxaul and saltwort, and the species in it are considered sandy-desert and desert plants.

Genus Saxaul (*Haloxylon*). Saxaul is considered a sandy-desert, desert plant, and its habitat is adjacent to the border of deserts and semi-deserts. In the conditions of our republic, saxaul blooms mainly for 5-7 days in March-April, and after flowering in hot summer, fruit (seed) nodules are not formed, only by September (this process can vary by 10-15 days depending on climatic conditions) winged seed concretions form. At the end of September, many winged seed nodes form on saxaul. Seeds are formed in the form of winged, blue, flower species. Ripe seeds are harvested in November and December.

1 kg of black saxaul seeds contains 150-350,000 seeds in the state of removal of wings, depending on the degree of ripeness (the mass of seeds may vary depending on the physiological state). Wings around seeds range in size from 0.4 mm to 10 mm and are the main means of natural seed dispersal. It is of practical importance to pay attention to the age category when collecting saxaul seeds.

The age class of the saxaul is set at 5 years. Age group: young tree (1-10 years), middle-aged tree (11-15 years), tree of the age before maturity (16-20 years), age of tree at maturity (21-25 years), age of mature tree (26- 30 years). To determine the age of these saxauls and collect seeds in artificially created forests, it is advisable to collect saxauls with an average age of 11-20 years, which are considered middle-aged and young trees according to the register of forest trees of forestry.

The level of physiological maturity of seeds of trees of this age is higher than that of young saxaul trees.

In natural and cultivated plantations of saxaul, 4- or 5-year-old seed-bearing trees are found, but among them it was found that there are very few trees with physiologically ripened seeds, and many trees with immature seeds. Conducting breeding work on these young trees, selecting seed forms and preparing seeds from them is an effective work. Plantings of saxaul based on the seeds of these breeding forms lead to the expansion of natural populations due to rapid seed production.

Saxaul seeds are harvested and dried dry or wet, as the harvest period is mainly in the winter season. At the same time, saxaul branches are connected during the collection of seeds, because in the process of collecting seeds they are torn off (torn off) from the stem. Collecting one at a time will not work, so you need to dry the seeds and clean them on the branches before placing them in special equipment to remove the wings.

After drying the saxaul seeds and separating them from the main stems, the seeds are de-winged by placing them in a de-winging machine, while the seeds pass through the machine, separating into varieties.

Picture 1. Saxaul seed wing remover **Picture 2.** Dewinged saxaul seeds passed through the machine



The wingless seeds that have passed through this device are once again cleaned using a special wind ventilation.

Conclusion

It is known that saxaul seeds cannot be stored for years, they lose their ability to germinate, that is, the property of physiological activity. Accordingly, in order to prepare these cleaned seeds for planting this year, the seeds are placed in a special solution added to the water. At the same time, immature seed pods once again come to the surface of the water, and physiologically immature ones are removed from the water.

As you can see, really well-ripened seeds sink under water, the purpose of placing them in this aqueous solution is to prevent root rot of saxaul seedlings. After removing the seeds from this solution, they are treated with clean, dry soil from ordinary non-saline soft valleys (between ravines).

As a result, when seeds are treated with special clean fine soil, the seeds are covered with fine loose soil. These coated saxaul seeds are laid out and dried to a permeable state in which air can circulate. Do not leave seeds stuck together. After that, these finished coated seeds can be temporarily stored in warehouses, if possible in non-synthetic hemp bags.

On the basis of coated seeds prepared for this planting, among the types of work of practical importance are activities aimed at establishing green spaces on the dried bottom of the Aral Sea, preventing the rise of dust and salts, improving and stabilizing the bioecological balance of the Aral Sea region.

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