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Salvia Officinalis Seed Germination

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Abstract: Seed germination of Salvia officinalis was studied in the greenhouse and in the laboratory. Based on the results, it is possible to propagate from plant seeds.

Keywords: Salvia officinalis L., seed morphology, stratification, seed germination.

Introduction:

About establishment of free economic zones of the President of the Republic of Uzbekistan "Nukus-farm", "Zaamin-farm", "Kosonsoy-farm", "Syrdarya-farm", "Boysun-farm" and "Parkent-farm" In accordance with the Decree of the President of the Republic of Uzbekistan, in order to actively attract foreign and domestic investment in the implementation of investment projects aimed at the development of the pharmaceutical industry of the Republic, to develop the local market of medicinal plants replenishment of produced high-quality drugs, their deep processing and organization of production of high value-added pharmaceutical products, In order to create new jobs and increase incomes of the population of the Republic of Karakalpakstan, Jizzakh, Namangan, Syrdarya, Surkhandarya and Tashkent regions on the basis of complex and effective use of production and resource potential, FEZ "Nukus-farm", "Zaamin-farm" SEZ, Kosonsoy-farm SEZ, Syrdarya-farm SEZ, Boysun-farm SEZ and Parkent-farm SEZ were established. On the basis of these projects, one of the urgent tasks is to carry out the necessary scientific and practical work on the cultivation and processing of medicinal plant raw materials in natural conditions in the Republic, including in Surkhandarya region [1, 2].

Today, the world pays special attention to the involvement in the production of valuable plants that retain their medicinal, edible and fragrant properties, as well as to the improvement of ways of cultivation. In addition, the fact that the farm industry of the Republic is not provided with naturally growing medicinal plant resources, taking into account the soil and climatic conditions of Surkhandarya region, is one of the most promising medicinal plants - a valuable source of medicinal and food raw materials Salvia officinalis. Given the fact that it is important to develop ways to grow export-oriented raw materials from plants in different soil-climatic conditions. One of the important tasks is to develop ways of growing medicinal mavrak (*Salvia officinalis* L.), which is widely used in folk medicine and medicine, including in the Surkhandarya region [3].

Salvia officinalis L. is a shrub of the Lamiaceae family, growing up to 80 cm in height (sometimes up to 100 cm). The root is strong, woody, branched up to 4 rows, serrated, the main part of the root is located in a layer of 10-15 cm of soil, reaching a depth of 60 cm. The stems are quadrangular, the lower part is woody, gray, and the upper part is hairy, green. The leaves are opposite, oblong-lanceolate, petiolate, 2-8 cm long, 0.8-2.5 cm wide, curly, hairy, gray-green. The inflorescence is a spike-shaped part at the top of the stem, consisting of single or branched, false rings. The flowers are double-lipped, blue-purple. It blooms in June-July. The fruit consists of 4 nuts.

Homeland Mediterranean countries. It is grown in Moldova, Ukraine, Krosnada and Crimea. It is not found naturally in the flora of Uzbekistan, in our country medicinal mavrak is grown in small areas for the purpose of obtaining raw materials.

The seed is the generative reproductive organ of the seed plant and is the embryonic stage of plant ontogeny in the seed. Seed morphology and viability vary from plant to plant. Salvia officinalis seeds are spherical, 2.2-3 mm in size. 1000 seeds weigh 7-8 g. Environmental factors such as water, air, light, and temperature are the most important factors for seed germination. The seeds of some plants have a hard skin that is impermeable to water and air. To speed up the germination of such seeds, their seeds are artificially softened and scarified. In order to study the high seed germination of the seeds of the medicinal mavrak

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plant, it was treated with a special sand mixture. The fertility of salvia officinalis seeds sown in a greenhouse was studied. Medicinal mavrak seeds were sown in early spring in the greenhouse peat soil and thermostat, taking into account the soil climate. The germination rate of medicinal seeds was 82% and 65%, respectively. In the greenhouse, the seeds germinated in 7-15 days at + 18º - + 25º.

Conclusion:

Thus, taking into account the fact that *salvia officinalis* can be grown in different environmental conditions of Surkhandarya region and the plant is adaptable to a wide ecological range, it was recommended to grow under introductory conditions.

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