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LABORATORY STUDIES OF THE GENERABILITY OF MALVA SEEDS *(MALVA L.)*

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АННОТАЦИЯ
The article discusses the results of laboratory studies of the germination of seeds of mallow (Malva l.). The medicinal plant mallow has been used in medicine since ancient times. Mallow (Malva L.), is a genus of herbaceous plants of the Malvaceae family, the type genus of this family.
KEYWORDS: *balance, germination, laboratory, seeds, Petri dish, level.*

INTRODUCTION

By the 21st century, humanity has reached the level of using nature for its own needs, which has led to a violation of the ecological balance. The plant world, considered an important component of nature, has undergone major changes today. In particular, the floristic and systematic composition of individual regions, districts and the state of plant resources change from day to day due to changes in environmental conditions.

Medicinal herbs are widely used in the treatment of various human diseases, both in scientific medicine and in traditional medicine. With the development of natural science, botany, biologists, doctors, and chemists scientifically substantiated the practical use of many medicinal plants and enriched traditional medicine in this regard.

Today, one of the important tasks facing botanists in Uzbekistan is the conservation of plant diversity, as well as the protection of rare and endangered species and the study of the gene pool of existing plants and their resources on a scientific basis.

The wealth of inexhaustible and diverse plants of our country is a great resource for obtaining medicines. Despite the rapid development of synthetic chemistry and the fact that many drugs are obtained chemically, currently up to 40% of medicinal preparations are obtained from herbs.

In this regard, in order to organize the cultural cultivation and processing of medicinal plants, support the construction of cultural plantations of medicinal plants, as well as the widespread use of medicinal plants in the prevention and treatment of diseases was accepted, Decree of the President of the Republic of Uzbekistan, of 20.05.2022 No. PP-251 "On measures to organize cultural cultivation, processing and widespread use of medicinal plants in treatment."

METHODS AND MATERIALS

Studies on the germination of mallow seeds were carried out in laboratory conditions at the Faculty of Biology of Karakalpak State University. General botanical methods are used. The purpose of the study was to study the germination of mallow seeds in laboratory conditions. Plant seeds were planted in Petri dishes with distilled and ordinary water, humus, and 25 seeds were planted in 4 Petri dishes.

RESEARCH RESULTS

The medicinal plant Mallow (Malva L.) has been used in medicine since ancient times. Malva (Malva L.), is a genus of herbaceous plants of the Malvaceae family, the type genus of this family. Mallow is an annual, rarely bi- and perennial herbaceous plants, with a lying, ascending or straight stem, at first fluffy hairy, and later naked, 30-120 cm high.

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The leaves are petiolate, rounded heart-shaped, with five to seven lobes, or incised, pubescent.

Flowers one to five in leaf axils; very few species have inflorescences - brushes. Petals deeply notched, oblong-obovate, pink, with three dark longitudinal stripes. Blooms from June to August. Mallow seed pods are small, rounded in shape.

The scientific study of mallow was carried out in laboratory conditions. Plant seeds were planted in Petri dishes with distilled and ordinary water, humus, and 25 seeds were planted in 4 Petri dishes. After that, the seeds were planted on a paper napkin in plain water. These waters were at room temperature and kept at the same temperature in Petri dishes. Seeds planted on a napkin in ordinary water began to take root within 4 days. The seeds planted on this napkin were given an average of 5-10 ml of water per day.

Observations were made twice a day, in the morning and in the evening. When checking the germination of seeds of a medicinal button in laboratory conditions, the average germination was 45 seeds out of 100 seeds, and the average germination was 45%.

Fig.1 Germination of seeds in a Petri dish

Under greenhouse conditions, the seeds were sown by placing 10 seeds in 4 cups of 300 ml. Seeds in humus 6 cm thick and cups 1 cm thick were planted to a depth of 1.5 cm.

Within 7 days after sowing, the plants began to slowly germinate. Before germination, the plants were moistened 2 times during 7 days, in the morning and in the evening.

When measuring in a greenhouse 9-day-old young shoots of a plant planted in humus and sand, it turned out that their height is 2 cm. You can observe how young seedlings of a 10-day-old plant planted in humus and sand in greenhouse conditions, gradually turn green and chloroplast pigments appear in them.

Seeds sown in humus and sand under greenhouse conditions were carefully studied, for example: the growth of young seedlings, their desire for light, the appearance of the first lawns of plants, the appearance of the first leaves.

For 15 days, young seedlings planted in humus and sand and germinated in greenhouse conditions grew tall.

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Fig 2. Germination of mallow seeds

Under greenhouse conditions, young seedlings of plants planted in humus and sand were observed for a total of 22 days from the date of planting, after which the germination of plant seeds was determined.

Taking into account the fact that the experiment was carried out with 10 seeds in each of 4 glasses, 14 seedlings emerged from 40 seeds, and the seed germination was 35% (table).

Table

Permeability values in clay and sand mallow seeds

№	Boarding time 10.05.	17.05.	19.05.	20.05.	24.05.	Germination (%)
1	0	0	1	1	3	30%
2	0	2	4	4	4	40%
3	0	4	4	4	4	40%
4	0	1	2	3	3	30%
Average germination (%)						35%

CONCLUSION

The results thus obtained show that the germination of mallow seeds planted under laboratory conditions in Petri dishes was 45 seeds out of 100 seeds and the average germination was 45%. Planted mallow seeds in greenhouse conditions in humus and sand, out of 40 seeds, 14 seedlings sprouted and seed germination was 35%.

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