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The Influence of Climate Factors on the Determination of Seed Quality and Seed Purity of Scutelaria Comosa Seed

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Annotation. In this scientific article, the purity indicators of the blueberry plant were 70-84.0% compared to the total weight of the sorted seeds of the experiment (options 2, 3, 4). It was noted that the highest indicator was 84.0% in the 4th option of the experiment, 11.7% higher than the 2nd option, and 4.9% higher than the 3rd option.Among the experimental options, the highest seed energy and germination were recorded in the 4th option, that is, in the seeds collected on September 10 from the 3-year-old plant seedlings.

Key words: golubika plesnevelaya, medicinal plant, kust, seed, petri dish, filter bag, variant, energy germination, rapid germination.

Enter. In the countries of the world, there are global environmental problems, such as the increase in the rate of production, the increase in the number of people, the pollution of soil, water and atmospheric air, the decrease of forest areas and biological resources. In nature suitability of ecosystems and its successive management processes limiting human intervention is of great importance.Resolution No. 4670 of the President of the Republic of Uzbekistan, Sh.M. Mirziyoev, dated April 10, 2020, "On measures for the protection of medicinal plants growing in the wild, cultivation, processing and rational use of available resources."The President of the Republic of Uzbekistan Sh.M. Mirziyoev dated November 11, 2020 "On measures to expand the scope of scientific research on the cultivation and processing of medicinal plants, their seed production" No. serves to a certain extent in the implementation of the tasks specified in the documents.

Object and method of experiment. Laboratory analysis, "Medicinal and technical plants" laboratory of the Institute of Chemistry of Plant Fashions, determination of quality indicators and purity of seeds of moldy blueberry (Scutelaria comosa).

Experimental results and their discussion. Determination of germination energy and germination indicators under laboratory conditions. Moldy blueberry (Scutelaria comosa) is a plant belonging to the mint family (Lamiaseae). The stem is woody, the semi-shrub stem is 15-40 cm tall, it is a plant. The leaves are triangular-oblong or ovoid, island-shaped or tail-shaped, rough and pitted. Experimental results and their discussion. Determination of germination energy and germination indicators under laboratory conditions. Moldy blueberry (Scutelaria comosa) is a plant belonging to the mint family (Lamiaseae). The stem is woody, the semi-shrub stem is 15-40 cm tall, it is a plant. The leaves are triangular-oblong or ovoid, island-shaped or tail-shaped, rough and pitted. The flowers consist of dense, usually elongated silk nodes. The fruit cup is 3-4 mm long, the upper lip is transversely oval, strongly concave, and the width is 7-8 mm. The yellow outer part of the crown is hairy, the length is 20-25 mm. The nuts are angular, almost ovoid, the length is 1 .5 mm. It blooms in May-June, the fruit ripens in June-July. The weight of 1000 seeds is 0.957 g Determination of quality indicators of seeds is an important issue in medicinal plant breeding.

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Fig. 1. Weight of 1000 seeds of moldy blueberry plant.

Seed quality indicators include 1000 seed weight, seed purity, germination energy and germination rate. When determining the purity of the seed, it was studied whether it was completely ripe, whether it was whole, whether the seed was damaged in front of the flower, whether the seeds were broken or bent to one side, and the straw mixed with the seed.5.0 g of each option to determine the purity of moldy blueberry plant seeds. 3 samples were taken and each seed sample was examined separately using a magnifying glass, and whole, fully matured seeds were collected into one piece, damaged, bruised, crooked, split into the second part, straws between the seeds, broken seed pieces into the third part.

Separated pieces of each seed were weighed separately, their weight was determined, and the percentage of the weight of the total sample (5.0 g) was determined. The obtained results are presented in Table 1. In the 1st variant of the experiment, they were not taken into account due to the lack of seeds, in the remaining variants of the experiment (variants 2, 3, 4) the most sorted good seeds made up 70-84% of the total weight. Among these options, the highest indicator was recorded in the 4th option of the experiment, 84%, this indicator was 14% higher than the 2nd option, and 6% higher than the 3rd option.Other indicators of seeds, i.e. the amount of damaged seeds and impurities were found to be somewhat less (10.7%, 5.3%) in the above-mentioned option 4.

Table 1
Seed quality indicators

Option no	The weight of the obtained seed sample, g	Complete and whole seeds		Damaged seeds (bruised, bent, broken)		Mixtures (chaff, broken seed pieces)	
		g	%	g	%	g	%
1	-	-	-	-	-	-	-
2	5,0	3,5	70	1	20	0,5	10
3	5,0	3,8	76	0,6	12	0,6	12
4	5,0	4,2	84	0,4	10.7	0,2	5,3

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Seed germination energy and germination.

The energy of seed germination is the most important quality indicator, fully ripened, well-sorted, seeds that have passed the period of peace have high germination energy, and from them, productive, vigorous plants that adapt quickly to the external environment, and are resistant to diseases and pests.

Moldy blueberry seeds are harvested in the second and third years, when the first fruits turn brown, not allowing them to fall. In the experimental field, the seeds were collected according to the options on June 27, July 5, 10 (seeds obtained in July, germination is determined in February). In order to determine the germination energy and germination of blueberry plant with moldy blueberry in the experimental field, 100 seeds of plants grown in each option were counted. Moldy blueberry seeds are harvested in the second and third years, when the first fruits turn brown, not allowing them to fall. In the experimental field, the seeds were collected according to the options on June 27, July 5, 10 (seeds obtained in July, germination is determined in February). In order to determine the germination energy and germination of blueberry plant with moldy blueberry in the experimental field, 100 seeds of plants grown in each option were counted.

In determining the energy of germination, the emergence of grass from seeds, and the formation of grasses and roots during germination were taken into account. The results of the scientific research are presented in Table 2. Table nbl data shows that the seeds collected on June 27 were not fully ripe, so their germination energy and germination rate were very low. In this case, the germination energy was 31.2-40.7% and 35.0-43.0% according to the variants, when the seeds were soaked in water for 8 days. On the 12th day, the germination energy of the seeds collected from the plants of the experimental variants was 70.0-81.7%, and the germination was 72.3-84.0%.Since the seeds harvested on September 10 were relatively fully ripe, the germination energy of these seeds on the 12th day was 70.0% in the 2nd option, 77.3% in the 3rd option, and 81.7% in the 4th option.Seed germination was 72.3% in option 2, 79.2% in option 3, and 84.0% in option 4.

Conclusion. Based on the obtained data, it was determined that the germination energy and germination of blueberry seeds depends on the method of planting the plant (from seed and seedling by year) and the period of ripening of the seeds.

Among the experimental options, the highest seed energy and germination were recorded in 4 options, that is, in the seeds collected on July 5 from 3-year-old seedlings. Seed germination energy was 70.0%, and germination was 84.0%. From our experiments, we have come to the conclusion that environmental factors have a significant effect on the ripening of seeds of plants

Table 2
Seed germination of moldy blueberry plants under laboratory conditions

№	The day the seeds are thawed	Seeds picked on June 27						Seeds picked on July 5						Seeds picked on July 10					
		Union energy, %			Germination, %			Union energy, %			Germination, %			Union energy, %			Germination, %		
		8 кун	10 кун	12 кун	8 кун	10 кун	12 кун	8 кун	10 кун	12 кун	8 кун	10 кун	12 кун	8 кун	10 кун	12 кун	8 кун	10 кун	12 кун
1	4.02.2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	4.02.2020	10,7	26,0	31,2	29,6	35,5	35,0	47,9	56,7	63,5	44,8	50,5	66,4	60,4	66,1	70,0	55,4	62,1	72,3
3	4.02.2020	17,8	28,3	36,0	32,4	37,0	39,8	52,7	61,2	67,3	53,9	60,4	69,7	62,4	70,2	75,3	67,0	71,3	79,1
4	4.02.2020	21,0	30,8	39,7	36,0	40,1	43,0	58,0	65,3	70,0	59,0	64,0	72,3	69,3	77,0	81,7	74,3	80,4	84,0

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