



ANALYSIS AND SEED INFECTION OF VARIETIES OF DILL

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INTRODUCTION

Currently, there is a need to develop economically and technologically methods to increase the yield of green crops. High quality seeds are one of the main conditions for obtaining high and sustainable yields of green crops, in particular dill.

Dill is an annual plant known since ancient times. Its greens and seeds have long been used as a spice in the countries of southeastern Europe and Asia. The homeland of dill is the Near and Middle East. Dill is a long-day plant. In conditions of a long day, staking of dill occurs 32-40 days after germination. At the same time, 3-4 days with long-term lighting are enough for him. In a short day (up to 10 hours). Plant stemming is greatly delayed [4,10,13].

The optimum temperature for germination of dill seeds is +20 .. +260C [12,13].

Dill yield depends on the variety, sowing time, conditions and growing method. In the open field, the yield of early-ripening varieties of dill reaches 14-16 t / ha (9, 12) of late-ripening varieties of 20-50 t / ha [10,11].

The optimum temperature for germination of dill seeds is +20 .. +260C. Temperature +280C ... +320C causes a decrease in seed germination [5,13].

Dill seeds, rich in proteins, carbohydrates and minerals, represent a good nutrient substrate for the life and preservation of pathogenic microorganisms. Seeds can spread many diseases that worsen the quality and reduce the yield of dill. In order to prevent plant diseases in the field, it is

necessary first of all to investigate seeds as one of the primary sources of many diseases [10, 11].

Correct determination of the cause of the disease is the first stage in the fight against it. To diagnose contamination of dill seeds, it is necessary to know which pathogens are transmitted by seeds [3,6].

In this regard, the purpose of our work was to determine the seed infection of dill in varieties Orom, Anet, Alligator and Kharkovskaya 85. We studied the following questions: 1. Germination energy of dill seeds (germination). 2. Length of seedlings on starved agar and nutrient media. 3. Determination of external and internal infection.

RESEARCH METHODS

To accelerate seed germination, they are washed in warm water for a day. Then they are poured onto a damp cloth and kept at +20 .. +250C. In such conditions, the plants will sprout 2-3 days after sowing.

The germination energy of dill seeds was studied by germinating seeds in a humid chamber. Petri dishes were used as a humid chamber. The bottom of the Petri dish is lined with filter paper. The paper is folded in two layers, cutting out a circle to match the surface of the bottom of the cup. The cups are sterilized. Before spreading the seeds, the paper is moistened with sterile water. Water is taken in such an amount that the paper is wetted, but there is no excess water on the surface.



Seed placement should be carried out under conditions that ensure maximum sterility. The length of seedlings was studied on seedlings obtained in a humid chamber on starvation agar and on nutrient media. Potato and Chapek were used for the work.

Sprouted seeds are examined under a microscope. When studying the internal infection, cotton seeds were placed in 960 alcohol for 1 minute, and then dried on filter paper and the outer skin of the cotton seed was removed, and then they were laid out in humid chambers and on nutrient media.

The study of the germination of cotton seeds was carried out in a humid chamber. The experiment was repeated 4 times. Each replication contained 10 seeds. The germination of seeds was monitored for 10 days.

RESEARCH RESULTS

It can be seen from the results of the studies that the highest germination rate was manifested in the Orom variety, the germination rate reached 90%, and the lowest in the Kharkovskaya 77 variety, it was 57.5%, in the Alligator and Anet varieties, the germination energy varied from 65 to 70%.

The length of seedlings of dill seeds was studied by germinating seeds in a humid chamber, on starved agar and on Chapek's medium and potato agar. The repetition of the experiment is multiple.

The results of the studies are shown in Tables 2,3, and 4. The results of the analysis for each replication are summarized and the average percentage is displayed. The results of studying the length of the seedling in a humid chamber are presented in Table 2.

The table shows that the longest seedlings on the 15th day were in the Orom variety, and the smallest seedlings were found in the Kharkovskaya variety.

The study of the length of the seedlings grown on hungry agar showed that the greatest length of the seedling was manifested in the Orom variety (3.5 cm), and then I go to the Anet, Kharkovskaya and Alligator varieties (2.4; 2.2; and 2 cm) Tab. 3

Table 4 shows the results of germination of dill seeds on Chapek nutrient media and potato agar. The data in the table indicate that the seedling length on potato agar is longer than on Chapek. So in the Orom variety on the 15th day on Chapek's medium, the seedling length was 2.8 cm and on potato 3.6 cm.

Seed germination of various varieties of dill.

Table 1

Varieties	Number of seeds per experiment	Number of germinated seeds					%
		3	5	7	10	15	
Orom	40	11	18	26	30	36	90
Anet	40	9	12	21	26	26	65
Alligator	40	6	9	18	25	28	70
Kharkovskaya 77	40	3	5	16	20	23	57,5

In the Anet variety on Chapek's medium, the seedling length on the 15th day was 2.6 cm, and on potato agar 3.0 cm. A similar pattern was manifested in other varieties. A low pattern on potato agar was manifested in the Kharkovskaya variety, and on Chapek's medium in the Alligator variety.

Thus, on the basis of the research carried out, it was found that the highest germination energy was found in the Orom variety, and the lowest in the Kharkovskaya variety. the study of the epiphytic mycoflora of seeds showed that on the surface.

In the Anet variety, fungi of the genus *Aspergillus*, bacteria, *Fusarium*, actinomycetes were identified. The Alligator variety has fungi of the genus *Rhizopus*, *Cladosporium*, *Mucor*, *Penicillium*.

Fungi of the genus *Fusarium*, *Mucor*, *Rhizoctonia*, *Alternaria*, actinomycetes and bacteria were identified in the Kharkovskaya variety.

The study of the epiphytic mycoflora of seeds showed that in the Orom variety, mainly fungi of the genus *Aspergillus*, *Fusarium*, *Mucor*, *Penicillium*, *Alternaria* were identified.

The length of the seedlings of various varieties of dill in a humid chamber.

Table 2

varieties	Seedling length cm				
	3	5	7	10	15
Orom	1,2	1,6	2,00	2,3	3,2
Anet	1,00	1,2	1,00	1,9	2,3
Alligator	1,2	1,4	1,8	2,1	2,5
Kharkovskaya 77	00	0,5	0,7	1,2	1,6

The length of the seedlings of the studied varieties of dill on nutrient media.

Table 3

Varieties	The length of sprouts Chapek day					Potato agar day				
	3	5	7	10	15	3	5	7	10	15
Orom	1,5	1,9	2,2	2,6	2,8	1,8	2,00	2,4	2,8	3,6
Anet	0,8	1,2	1,6	2,00	2,6	1,2	1,6	1,9	2,4	3,0
Alligator	1,00	1,4	1,7	2,00	2,2	1,4	1,8	2,00	2,2	2,8
Kharkovskaya 77	0,5	1,00	1,3	1,6	2,4	1,2	1,6	2,00	2,3	2,6

The length of the seedlings of various varieties of dill on starved agar.

Table 4

Varieties	Seedling length (cm) day				
	3	5	7	10	15
Orom	1,3	1,7	2,0	2,4	3,3
Anet	0,9	1,6	1,8	2,00	2,4
Alligator	1,2	1,4	1,6	1,8	2,2
Kharkovskaya 77	0,5	1,00	1,3	1,6	2,00

Fungi of the genus *Mucor*, *Rhizoctonia*, *Penicillium*, *Fusarium*, *Aspergillus*, *Alternaria* and bacteria are formed in all studied varieties.

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