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Factors Influencing The Spread Of Melon Flour Dew Disease

Azatova Gulasal Umidbek qizi
Urganch State University, 2nd Master Degree Student of Agronomy, Urgench State University
gulasal1404@gmail.com
Doschanov Jalolbek Saparboyevich
Senior researcher of Khorezm Mamun Academy,
d@mail.ru

Abstract: this article shows the effect of atmospheric air on the development of powdery mildew of melon under laboratory conditions. The experiments were conducted at a temperature of 280 C. As a result, there is information about the development of the disease with increasing humidity.

Key words: powdery mildew, disease, temperature, relative humidity, soil, thermostat, plant, disease spread.

At the world level, today, 6.2 mln. planted per hectare, 142.4 mln. tons of gross crops are grown. China, Turkey, India, USA, Iran, Egypt, and Spain are the countries that produce the most poliz crops. Melon varieties have been grown since ancient times in the regions of the globe where the soil and climate conditions are favorable for the cultivation of cash crops. Melon, in particular, has been a favorite product of the peoples of Central Asia since ancient times due to its high nutritional value. At a time when it is considered urgent to organize a healthy diet and expand the range of food products all over the world, improving the technology of growing this crop in increasing the export volume of melon products, which is of great importance in the national economy of the countries of the world, is one of the important factors that ensure the development of the industry [1].

Today, in many countries of the world, a lot of research work is being carried out on the breeding of melon species and the creation of varieties suitable for climatic conditions. In these countries, modern technologies of melon cultivation, storage and processing are being created and applied to production. Therefore, in every climatic condition, obtaining a continuous abundant harvest from the melon crop largely depends on the selection of adaptable varieties, preparation of their seeds before planting, and the establishment of a convenient planting period. , creates the need to develop advanced cultivation technologies, research with new methods based on the latest achievements of world science, and inform the world scientific community about it[2;3;4].

In recent ears, extensive measures have been implemented in our republic to ensure the food security of the population, to fully satisfy their needs for food products, but in this direction, insufficient research has been conducted in the Zarafshon Valley. In the Action Strategy of the Republic of Uzbekistan for 2017-2021, one of the important strategic tasks is "optimization of arable land and crop composition in agriculture, introduction of advanced agro-technologies and increase of productivity, increase of fruit and vegetable, sugarcane and grape cultivation". From this point of view, it is scientifically and practically relevant to develop methods of identifying and combating diseases by growing melon varieties in new alluvial soils with different growing substances and planting periods [5].

We have carried out research on the possibility of powdery mildew in the zargulobi variety of melon in the conditions of Khorezm region. In fields affected by powdery mildew, the spread of the disease was determined based on the following formula:

$P = (n/N) * 100$ [4]

P- spread of disease

n- total number of trees studied

N- total number of infected trees

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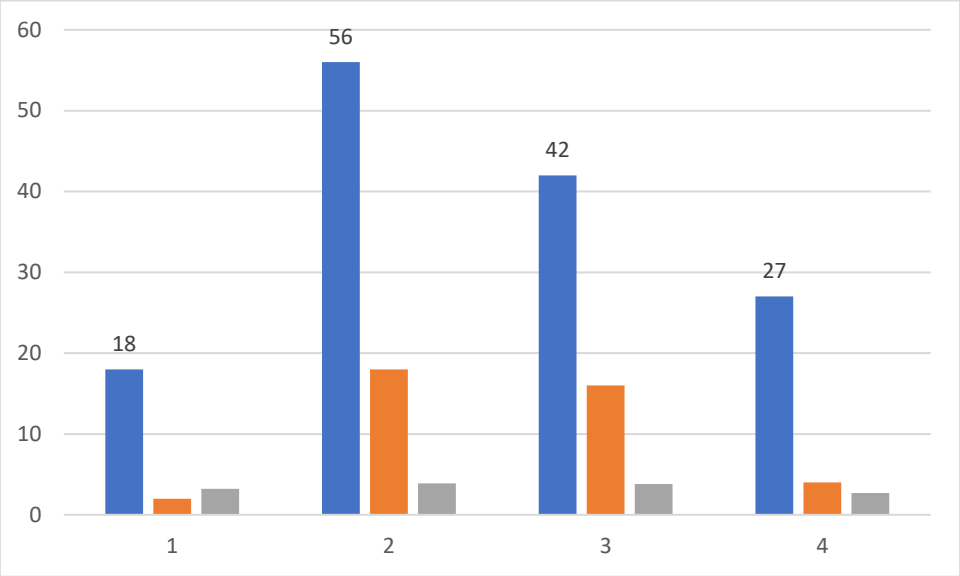
The prevalence of the disease was determined based on the following formula:

$$P = \frac{E\,(a * в) * 100}{N * K} \qquad [6]$$

P- disease prevalence
E (a*в) - the sum of the number of members affected by the disease multiplied by the number of points
N – total number of plant members observed
K- the highest score on the scale

Figure – 1. Development of powdery mildew of melon at different temperatures (28^0C)



Relative humidity of atmospheric air
Disease spread
Development of disease

The experiments were carried out on 10 melon seedlings grown in special containers of 3 kg. Herbariums infected with powdery mildew prepared last ear were infected with the plants growing in pots at different temperatures in a thermostat. In order to control air humidity, filter papers were moistened. The obtained results are presented in Figure 1. In this case, when the relative humidity of the air was 18%, the spread of the disease was equal to 2, and the development of the disease was equal to 4.

When the relative humidity of the air was 57%, the spread of the disease was equal to 18 and the development was equal to 3.9. From the obtained results, it can be concluded that the disease of powdery mildew begins to become more active when the relative humidity of the air is higher than 27%. When the relative humidity is 42%, it develops to a level that causes severe damage.

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