ALTERNARIA BLIGHT AND DAMAGE OF MELON

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Abstract. *The article provides information about Alternaria melon blight, its pathogens and harm. It mainly contains information about the symptoms of Alternaria disease during the growing season of melon, the harm caused by the disease, and resistant varieties. Experiments were carried out in open fields in the central regions of the republic in Sirdarya and Jizzakh regions, as well as small field experiments in lysimeters.*
Keywords*: melon, alternaria, variety, disease, mushroom.*

Introduction: In the subtropical and temperate climatic regions of the world, Polis crops are planted on a total area of 6.2 million hectares with a total yield of 142.4 million tons. China, Turkey, India, USA, Iran, Egypt and Spain grow the most polis crops. Resolution of the President of the Republic of Uzbekistan PD-106 dated January 28, 2022 “On additional measures for the further development of seed production of agricultural crops” was adopted. According to the content of the mentioned decision, since 2022, 13 thousand 395 hectares of land have been allocated in the republic for organizing seed production of vegetables, sugar cane, legumes, oilseeds and other crops.

Especially the melon fruit is a crop that everyone loves to eat because of its sweetness and richness in vitamins. During the growing season, the melon crop is damaged by a number of diseases and a certain amount of yield is reduced. Particularly in recent studies, it has been noted that Alternaria blight causes great damage. It has been observed that this disease damages the plant from 15% during the growing season to 35% in fields, where the disease is common, especially in years with high rainfall. To prevent the spread of Alternaria disease and obtain a high yield, the main measures are the timely implementation of agrotechnical measures, planting crops on time, treating seeds with effective fertilizers before sowing, and the use of fungicides. against diseases during the growing season.

Research methods. In studies conducted in the central regions, methods were used to investigate the symptoms of diseases of melon varieties, their distribution and severity, negative impact on yield and analysis of diseases in laboratory conditions. The experiments used general methods accepted in phytopathology. For identifying the diseases and fungal pathogens, the identifiers of M. K. Khoryakov (1969) and N. M. Pidopalichko (1977) were used.

Research results. Research was mainly carried out in 2022-2023 in Syrdarya and Jizzakh regions of the central regions of the republic. In the experiments, route observations were carried out from the period of melon germination to the period of ripening. Research has found that melons have a number of fungal and bacterial diseases. However, among these diseases, Alternaria blight was common and plant damage was observed.

During the research, the degree of infection of melon varieties with diseases, external symptoms of diseases and the growing season of the disease were studied. (Table 1).

Distribution of Alternaria in the central regions.
(Jizzakh, Syrdarya regions 2023)

No.	Place, where the sample was taken	Varieties	Phase of melon development	Prevalence of Alternaria blight in %
1.	Mirzachol district, Jizzakh region. "Sharq" farm	Local Samarkand Variety Obinovvot	During the flowering period	18%
2.	Mirzachol district, Jizzakh region."Sharq" farm	Variety White seeds 1157	During flowering period	20%
3	Dostlik district,Jizzakh region. "Obidjon Ota" farm	Variety Khandalak	During flowering period	30%
4	Mirabad district,Syrdarya region. "Mirabad yulduzi" farm	Variety Shakar palak	During flowering period	15%
5	Syrdarya region, Oq oltin farm, "Temiryol agro sanoat industry" UE	Kok kalla posh variety	During flowering period.	23%
6	Dostlik district,Jizzakh region. "Obidjan Ota" farm	Variety Zhora qand	During flowering period	15%
7	Mirabad district,Syrdarya region. "Mirobod Star" farm	Variety Amir	During the flowering period	15%
8	Syrdarya region, Oq oltin District,"Temir yol agro-sanoat" UE	Variety Kokcha 588	During the flowering period	25%
9	Dostlik district,Jizzakh region. "Obidjon Ota" farm	Variety Kichkintoy	During the flowering period	25%
10	Mirabad district, Syrdarya region "Mirobod yulduzi" farm	Variety Chillaki	During the flowering period	20%

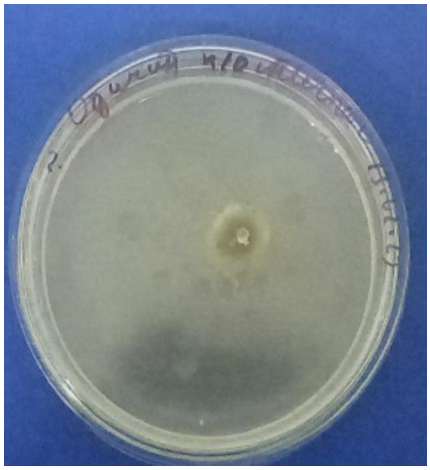
It is obvious from the information given in the table that the spread and harmfulness of the disease in melon fields of 10 varieties from farms, located in several areas of Syrdarya and Jizzakh regions have been studied. To determine the composition of pathogenic fungi in melons, samples were taken from infected plants and analyzed in laboratory conditions. Pure cultures of pathogenic fungi were determined morphologically using a microscope. Alternaria alternata turned out to be the most common mushroom in melon fields. For the calculation the intensity of disease spread, the Anpilogov scale was used.

As a result of observations, it has been established that the varieties Khandalak, Kokcha 588 and Kichkintoy sorts are resistant to Alternaria disease. It has been established that the varieties Amir, Zhora qand, Shakar palak were less susceptible to Alternaria blight, that these varieties are resistant to Alternaria blight.

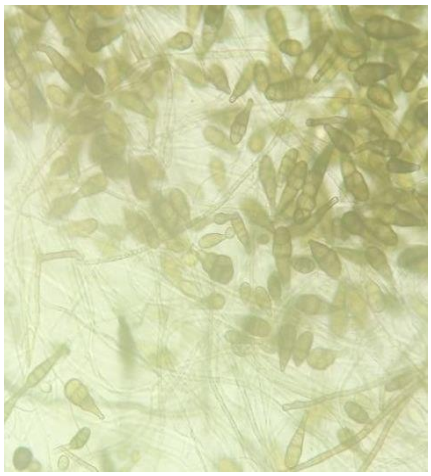
White-seeded melon variety infected with Alternaria

Picture 1

a



b



c

a) Melon leaves infected with Alternaria

b) Pure culture of the fungus isolated from melon infected with Alternaria

c) Microscopic view of conidia of the fungus Alternaria alternata isolated from melon leaves

In these pictures it can be obserrved that melon leaves infected with Alternaria, a mushroom growing on an artificial nutrient medium and a microscopic image of the fungus. Samples of infected plants were taken from each field and analyzed in the laboratory.

Microorganisms isolated from diseased plants were divided into pure cultures and using a microscope, they were determined to which genus and species they belonged. Artificial growth medium and temperature play an important role in determining the types of fungi.

Summary.

By summerising the information based on the obtained result of the research, it should be suggested that the local melon varieties Local Samarkand, Ak Urug 1157, Khandalak, Kokcha 588, Kichkintoy sort, Chillaki are resistant to Alternaria blight. The varieties Obinovvot Shakar palak, Kok kalla posh, Zhora kand, Amiri turned out to be resistant to Alternaria blight. One of the most effective methods of disease control is the selection of disease-resistant varieties.

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