



Degree of Affection of Different Varieties of Apricot with Klyasterosporioz

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Abstract: The article presents information on the degree of damage to apricot varieties by the disease klyasterosporioz and the development of the disease in the conditions of the Samarkand region.

Keywords: Klyasterosporioz, apricot varieties, defeat, development, leaf, branch, fruit.

Introduction. In Uzbekistan, stone fruit trees are of great importance in horticulture, and its area is 70 thousand hectares. To obtain a high-quality harvest from them, it is important to carry out agrotechnical measures in a timely manner and at the required level, as well as to effectively deal with harmful organisms with appropriate means.

Damage to stone fruits by harmful organisms sharply reduces the yield of fruits and, in particular, adversely affects the chemical composition of fruits, reducing their marketability and shelf life. Klyasterosporioz (also known as hole spot) is very common in stone fruit orchards in our country, especially in apricot orchards, and seriously reduces the yield and quality of fruits [1,3,4,6]. Apricot trees are more susceptible to this disease, the branches of which are thickened and are in fruit. Therefore, the effective use of means to combat this disease is an urgent issue.

Materials and research methods. Experiments on the study of klyasterosporioz in apricot orchards were carried out in the Samarkand branch of the Research Institute of Horticulture, Viticulture and Winemaking named after Academician M. Mirzaev. The level of damage to apricots by the klyasterosporioz disease was determined on the basis of the scale presented in the book "Basic Methods of Phytopathological Research" [5]. Some observations and calculations were carried out according to the method recommended by Professor Sh.T. Khodzhaev [2].

Research results and their analysis. Klyasterosporioz is caused by the fungus *Clasterosporium carpophilum* (Lev.) Aderh. The fungus infects all above-ground parts of all stone fruits (especially apricots and cherries). First, brown spots with a reddish border appear on the leaves, after 1.5-2 weeks the tissues fall off and a round hole forms in place of the spot. The accumulation of dark dotted conidia, formed on the reverse side of the spot that has not yet fallen off, can be seen with a magnifying glass. The old leaf has many round holes with a reddish-brown border. Because of this characteristic symptom, the disease is called perforated spotting.

Symptoms of the disease on fruits are similar to those on leaves, but deep ulcers with raised edges are often observed. Sometimes a black scab appears on the surface of the fetus. On young branches, the spots are round or oblong with a reddish-brown border, and on older branches, the spots are not pronounced, and sap is visible in the affected area. Apricot flowers fall.

The air temperature of 18-20 °C and humidity of 70-80% are favorable for an outbreak of the disease. The fungus overwinters mainly as mycelium and conidia in the soil and in cracks in trunks [4,7].

According to F.M. Boizhigitov [6,8], in the Bostonlik district of the Tashkent region, the leaves of the Arzami apricot variety are affected by klyasterosporioz from 57.0% to 86.0%, the branches - from 43.0% to 60.0%, and the fruits from 60.0% to 89.0% were infected, it was found that the development of the disease ranged from 25.0% to 71.0%. It was noted that in the apricot variety Yubileiny Navoi in the Yakkabog district of the Kashkadarya region, these indicators were up to 84% in leaves, up to 57% in branches, and up to 87% in fruits. The development of the disease ranged from 37.7 to 60.5%.

In our studies, we determined the level of infection of apricot varieties Navruz, Sovetsky, Yubileiny Navoi, Kursodik with klyasterosporioz.

In our republic, the widespread apricot variety Yubileiny Navoi is highly susceptible to the disease of klyasterosporioz. It was found that 28.9% of leaves, 19.4% of branches and 33.8% of fruits were damaged, and the development of the disease was 14, 5, 9, 8 and 12.5%, respectively. Klyasterosporioz infection of the Navruz variety was assessed by indicators similar to the Yubileiny Navoi variety. In the Navruz variety, disease damage was observed in leaves, branches and fruits, and their numerical expression was 23.8, 18.0 and 29.8%, respectively. As a result of the study, it was found that the degree of damage by the fungus of klyasterosporioz was low in the Kursodik and Sovetsky varieties compared to other varieties. That is, in the Sovetsky variety, the damage to the leaves was 18.4%, stems - 14.2%, fruits - 22.4%. It was found that the development of the disease in leaves is 10.1%, in stems - 7.2%, in fruits - 8.8%. In the apricot variety Kursodik, klyasterosporioz was detected on leaves 16.6%, on branches 12.2% and on fruits 19.4%, and the indicators of its development as a result of the study were recorded as 9.3, 6.5 and 7.9%, respectively.

Table 1. The susceptibility of apricot varieties to klyasterosporioz disease, %

Apricot varieties	Susceptibility			Development of the disease		
	leaves	branches	fruit	leaves	branches	fruit
Yubileiny Navoi	28,9	19,4	33,8	14,5	9,8	12,5
Kursodik	16,6	12,2	19,4	9,3	6,5	7,9
Novruz	23,8	18,0	29,8	13,1	8,5	10,4
Sovetsky	18,4	14,2	22,4	10,1	7,2	8,8

It has been established that the defeat of apricots by klyasterosporioz and the development of the disease depend on natural conditions, the technology of caring for the tree, as well as its variety. In our opinion, the degree of damage by the disease and its development depend on the biological and genetic characteristics of the variety.

Conclusion. Klyasterosporioz causes serious damage to the leaves, branches and fruits of apricots. It has been established that the degree of disease damage and its development are different in the varieties Navruz, Sovetsky, Yubileiny Navoi, Kursodik. It has been established that varieties Kursodik and Sovetsky are less affected by the disease. This information is recommended for use in the fight against the disease.

References.

1. Hasanov B.A., Ochilov R.O., Kholmurodov E.A., Gulmurodov R.A. Diseases of fruit and nut, citrus, berry bushes, as well as grapes and their control.//Tashkent, 2010.- p. 46-48.
2. Guidelines for testing insecticides, acaricides, biologically active substances and fungicides (edited by Professor Sh.T. Khodjaev).// Tashkent, 2004, 104 p.

3. Idrisov S. Klyasterosporiosis stone fruit. // Journal of Plant Protection and Quarantine. - Moscow, 1977. - p.37-38.2.
4. Isakov O. Some bioecological features of the causative agent of apricot clusterosporiasis // Materials of the 9th conference of young scientists of Uzbekistan.-Tashkent, 1977.- p.141-146.
5. Chumakov A.E., Minkevich I.I. and others. Basic methods of phytopathological research// Scientific works of the All-Union Academy of Agricultural Sciences named after V. I. Lenin.- Moscow, 1974.-p.57.
6. Boyzhitov F.M. The main diseases of stone fruit crops and the development of measures to combat them // Abstract of the dissertation of the degree of candidate of agricultural sciences, Tashkent, 2011, p.23.
7. Boyzhitov F.M. Protecting peaches from klyasterosporiozis // Bulletin of Agricultural Science of Uzbekistan, 2018, No. 2 (72), p. 38-41.
8. Boizhitov F.M., Khakimov A.A. Some bioecological features of pathogens of klyasterosporiozis and moniliosis // Bulletin of Science and Practice, 2018, v.4, No. 12, p. 268-272.