

COMMON DISEASES AND PESTS OF RAWBERRY

Axmedov Otabek

Assistant of the Karakalpak Institute of Agriculture and Agrotechnologies

Seilbekov Ruslan

Assistant of the Karakalpak Institute of Agriculture and Agrotechnologies,

Doctor of Philosophy (PhD) in Agricultural Science,

Abstract. Examination of raspberry diseases and their treatment methods. The main types of diseases affecting raspberries are viral infections and fungal infections. They can simply be called raspberry viral and fungal diseases. Many varieties are susceptible to these diseases, but in modern catalogs there are species resistant to diseases.

Keywords: Fungal disease, gray (botrytis), mosaic, stem rot, disease control, spider mite.

Everyone who grows crops in their own garden should create space for raspberries. Children and adults love raspberries. Growing it is not difficult, it consists of the usual methods for a caring gardener. In preventing diseases, along with qualified adherence to the requirements of agricultural technology, it is necessary to know which raspberry diseases are most common in the region. Protecting raspberries from diseases is an important step in berry cultivation.

Main diseases and pests In raspberry cultivation, it is important to combat various pests and diseases that can reduce yields. Below are the most common of them.



Grey (botrytis) - The most common disease. Small gray spots appear on the fruit, which grow and affect the entire fruit. It begins to rot, covered with gray ash containing fungal spores. Spores spread with moisture and air and can infect the entire raspberry tree. The disease is observed on very cool days with high humidity. The disease affects not only berries, but also buds and leaves. Infected plants do not survive the winter and die.

Stem rot (Didymella applanata): This disease causes black or purple spots to appear on raspberry shoots, especially in leaf axils. Infected shoots weaken and reduce yield..



Mosaic - The main symptom is on the leaves. In them, spots of irregular shape are noticeable, which become mottled by the end of summer. Leaves shrink, buds weaken, and growth slows down. Berries turn into wood and become unusable. Raspberries don't die, but the disease is completely untreatable. The disease is transmitted by aphids.

Viral diseases: Raspberry viruses (**for example, raspberry mosaic virus**) slow down plant growth, cause colorless spots on leaves, and significantly reduce yield. Viral diseases are difficult to treat, therefore prevention is important.





Disease control measures - shrubs with signs of disease are removed and burned; qualified treatment with medicines for plant protection; restoration of agricultural technology in case of violations. Thickening of plants leads to the rapid development and spread of gray rot, therefore sowing is always thinner. This ensures good ventilation and protection from diseases. The diseased bushes are removed and burned, in spring they thoroughly clean the raspberry plantations of leaves and remnants, and then they are treated with Bordeaux mixture.

Raspberry beetle (*Byturus tomentosus*): The larvae of these beetles enter the fruits and damage them, resulting in fruit rot or failure to develop. Small holes and signs of rot are observed in the affected fruits.

Raspberry branch fly (*Lasioptera rubi*): The larvae of this fly live inside raspberry branches, which slow down plant growth and can cause branches to dry up.

Spider mite (*Tetranychus urticae*): Occurs especially in hot and dry weather. It lives in the lower parts of leaves, causing them to turn yellow, and as a result, the leaves dry up and fall off.

Biological methods of pest and disease control (e.g., using beneficial insects) and *chemical methods* (use of fungicides and insecticides). Also, the selection of disease-resistant varieties and compliance with agrotechnical measures (for example, destruction of plant residues, correct cutting) plays an important role in preventing the spread of diseases.

In conclusion, raspberries are not only an important branch of agriculture, but also an integral part of the ecological system and a valuable product for human health. Pests, diseases, and control of raspberries are an important part of berry cultivation. Without timely measures, you can lose your harvest and your favorite varieties. The fight against them is carried out throughout the season - from spring to autumn. Be sure to treat the shrubs for early spring prevention and don't forget to check them regularly.

REFERENCES:

1. State Statistics Committee of the Republic of Uzbekistan. Sown areas of agricultural crops, areas of orchards, vineyards, gross harvest and yield (in all lands) in 2019. Tashkent, 2020. 206-207.
2. Evdokimenko S.N. Selective evaluation of original forms of remontant type raspberries for resistance to fungal diseases. Scientific works have been published. Volume 10. 2016. - P. 96-102.
3. Golovin S.E. The main reasons for the destruction of raspberry plantations in the European part of Russia in 2013-2014 // Fruit and berry growing of Russia. Collection of scientific works. Volume XXXXI, 2015. -P. 78-83.
4. Grevtseva E.I. Protection of Berry Crops from Diseases. Eagle. 1983. - 54 p.
5. Grishanovich A.K. Diseases of raspberries in Belarus. -Minsk: Izv. AN BSSR. Biological Sciences Series. Science and technology. 1975. No2. -P. 114-116.
6. Isayeva E.V. Anthracnose of raspberries and measures to combat it // Horticulture. Harvest. - Kiev: 1967. -P. 107-114.
7. Isayeva E.V., Shestopal S.A. Atlas of Diseases of Fruit and Berry Crops. - Kiev: Harvest. 1991. -210 p.

