

PHYTOSANITARY MEASURES AGAINST CHERRY FLY

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Received	February 28 th 2021	The main pest of cherry and cherry trees is the cherry fly, whose larvae feed on the pulp of berries. The infection of the tree with this parasite manifests itself in spoiled fruits devoid of natural gloss with depressions and rotten areas. In particular, cherry and cherry varieties of late and medium ripening are susceptible to the negative influence of the cherry fly.
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The cherry fly (*Rhagoletis cerasi*), a variegated fly, is ubiquitous. The greatest harm from the parasite is observed in the Republic of Fergana region, where the damage to fruits can exceed 50%. The body length of an adult fly is 29–53 mm. The forehead and the front half of the head of the insect are golden yellow, the body is glossy, dark brown or almost black; the fly's eyes are green, the hips are black. The wings are transparent with wide transverse stripes of dark brown color and yellow at the base. The scutellum, tarsi, and tibia are yellowish-orange in color. There are two wide longitudinal stripes on the sides of the chest. The female differs from the male in larger size and a large, pointed downward abdomen.

Harmfulness. The cherry fly damages crops such as cherry, sweet cherry, apricot and honeysuckle. During development, the larvae feed on the pulp of the fruit, which, due to excreted excrement, turns into a mushy mass. Infected fruits darken, deform, rot and fall off. Berries and fruits in which the cherry fly eggs were laid are absolutely unsuitable for human consumption.



The larva of the cherry fly.



The dome of the cherry fly.

An elongated oval egg is pointed on one side. The egg shell is smooth, yellowish-white. The egg reaches 0,75 mm in length and 0,22 mm in width. Closer to the apex, the egg has a weakly pronounced pattern of thin lines forming small hexagons. The cherry fly larva has an elongated white body narrowed towards the head, which consists of 13 segments. The integument of the larva is thin, through which a well-developed oral apparatus shines through. Over the entire period of its existence, the larva passes through 3 stages of development: Body length – 0,65-1,74 mm. The posterior spiracles are very poorly developed and have two round openings. Thoracic spiracles are absent. Body length – 1,8–3,65 mm. The posterior spiracles enlarge, acquire a wide oval shape and three spiracular slits. Thoracic spiracles appear. The body length reaches 6–7 mm. The posterior and anterior spiracles are well developed. The posterior spiracular slits are extended in length and straightened. From the skin of the third stage larva, a pseudococon is formed, in which the fly larva becomes a pupa. During this period, organs and body parts of an adult insect are formed. The length of the pseudococone (puparium) is 2,5–4,5 mm, the color is yellowish. Insect lifestyle and reproduction For wintering, pupae deepen into the soil by 3–5 cm. In spring, when the surface of the earth 5 cm deep warms up to 10 degrees, young flies get out of their hiding places. Males are born first, and females appear later - after 4-5 days. The emergence of young flies in the southern regions lasts from mid-May to mid-July. The reddish-gray and sluggish insect has an underdeveloped reproductive function. In the first few days, the female needs

enhanced nutrition: juices released from cracks in leaves, trunks and fruits, sweet secretions of aphids and leaf fleas. After 2-3 days, having got stronger, insects begin to mate. Mating takes place in warm sunny weather at temperatures no lower than 18 degrees. After 7-10 days, the female lays eggs. For this, she looks for suitable places, carefully studying each fruit. Both ripe and still green berries are suitable. Having established the ovipositor perpendicular to the surface of the fruit, the female pierces it and lays eggs in the nutritious pulp. The whole process lasts no more than 4 minutes. The female's lifespan is about 1 month.



female and male cherry fly

During this time, she lays up to 150 eggs - 1 egg in each fruit. The development of the larva in the egg occurs within 7-10 days. After that, the larva continues to live in the berry and feed on its pulp. This stage lasts 15-25 days. The hardened larva falls to the ground and, burrowing into the surface layer of the soil, turns into a pupa. Pupae winter in false cocoons, which are located at a depth of 2–3 cm in heavy soils, and 4–5 cm in the lungs. To complete development, the pupa needs exposure to low temperatures (up to - 7 C). If in winter the temperature does not drop to -7 C, then the pupae cannot complete development and die. Soil temperatures below -20 C are also detrimental to them. Some pupae remain for secondary wintering. The insect remains in this state until the spring of next year. 14% of pupae find themselves in unfavorable conditions, which delays the further development of the pest for several years.

WAYS TO COMBAT THE PEST.

In the warm season (spring, summer, early autumn), the soil is regularly loosened at the base of the tree under the crown. Such procedures significantly reduce the number of cherry flies. planting cherries or cherries in the garden, choose varieties of early ripening. In this case, almost all the berries will be whole and juicy, since the harvest takes place before the flies lay their eggs.



Cherry fly pheromone trap

The cherry fly produces one generation per year. In case of mass spread of the pest, it is recommended to carry out chemical treatment of trees with special preparations against cherry flies - insecticides.

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