

**CONTROL MEASURES AGAINST THE EASTERN FRUIT BORER  
(GRAPHOLITHA MOLESTA BUSCK) IN THE CONDITIONS OF  
ANDIJAN REGION**

*Rakhmonova Madinakhan Kimsanboevna*

*Andijan Institute of Agriculture and Agrotechnologies*

*Abdullaev Bakhodir*

*Andijan Institute of Agriculture and Agrotechnologies*

**Abstract.** An insect belonging to the class Insecta, order Lepidoptera, family Tortricidae, genus Grapholita of oriental fruit-eating insects. It is found in the Central and Southern part of Europe, Ukraine, Caucasus, Austria, Bulgaria, Hungary, Greece, Germany, Italy, Spain, Poland, Romania, France, Switzerland, Czech Republic, Yugoslavia, southwestern part of Russia.

**Key words.** morphology, egg, larva, imago, butterfly, mushroom.

**Introduction.** China and Korea are the countries of origin of Oriental fruit eater. The oriental fruit borer was first identified as a pest in Japan in 1899 and in America in 1913, and spread to South Australia in 1959 and later to Brazil. By the 1970s, it had spread to the Mediterranean Sea. By 1980, it became known that the Eastern fruit-eater was also spread in the territory of Uzbekistan. Today, the Eastern fruit eater is distributed in Andijan, Namangan, Samarkand, Fargona regions and Tashkent city of Uzbekistan. In 2005-2006, it was known that 65-70% of peach trees were damaged in gardens in Baghdad district of Fergana region. Eastern fruit-eater was identified in 1964 in MDX states. In 1965, based on the results of extensive inspection of plant seedlings, it became known that the Krasnodar region, Sukhumi city of the Republic of Abkhazia, Garg and Ochamchir districts, Mejdunarodnyi nauchnyy zhurlan, Divichen, Kubin, Kusar and Khamchas districts of Azerbaijan are the main breeding grounds. Oriental fruit borer is a very dangerous quarantine pest. It damages fruit trees, young seedlings,

fruit trees with grains and seeds. Peaches, apricots, plums, pears, apples, cherries, quinces and hawthorns are especially affected. Morphology. Butterfly: General color is gray-brown. On the front part of the forewing there are seven pairs of white spots "Koshtyrnokhmen". Four of them are clearly visible on the edge of the wing. There are seven black spots on the outer corners of the wing. Orca fins have a broad gray-brown and bronze-velvet cover. The mustache is stringy and makes up half the length of the front wing, with thin and indistinct white hairs. The lower part of the abdomen is silky white, the legs are dark, covered with short yellowish white hairs. Wings are 12-14 mm in size. The female butterfly is larger than the male. Eggs: Oval, oblong, semi-transparent white shiny, turns reddish during hatching, becomes cloudy, after which larvae begin to emerge from the egg within 15-48 hours, the head of the larva is black, length 0.4-0.5 mm, width 0,15 mm in size [2, 325 pages] Larva: The larvae hatched from the eggs are milky white in color, the head is black, the chest is dark, and the anal part is hairy. Adult larvae are reddish-gray in color. The hairs on the body of the adult larva are brownish in color and differ from the plum worm, the plum worm has shorter body hairs. The respiratory tract consists of a skin covering with a dark border. The head is yellow-brown, there are black spots around the eyes and on the lunge. The larva's body is entirely covered with fine cuticular spines, but the shoulder muscles do not have these spines. The front chest is yellowish-brown. The segments of the posterior excretory organ are pale yellowish brown with black spots. Posterior excretory segments have comb-like anal combs with 4-7 teeth above the anal excretory organ.

Another difference between the eastern fruit borer and the plum worm is that there are 9 shields on one common segment of the 2nd thoracic segment, while in the plum worm, the individual larva is 12 mm long (Fig. 2). Gumbagi: Two rows of brown stripes on the shoulder side of the abdomen, indicating that it belongs to this family of characters. The eyes are black, complexly structured. At the end of the abdomen there are 10-18 spines of different sizes. There are 1-2

bristles on the side of the back and higher than the genital opening. The length of the sponge is 6 mm. Biology: Larvae hibernate in ripe silk-cocoons on the trunks of trees, between barks 5-50 cm above the ground, and sometimes in some rotten fruits among the remains of plants in the soil. Summer cocoons can be found on fruits, tree trunks, seedlings and other places. The period before the transition to the dome is divided into 3-4 days. The average incubation period is 10 days. Butterflies begin to fly when the air temperature is on average 15 °C. During this period, the butterflies fly between the peach trees and in three parts in an irregular zigzag movement, i.e. one up and one down. Butterflies fly mainly from sunset to dawn, but spring generations of butterflies can also be found during daytime, butterflies fly for 10-14 days, relatively more in summer and autumn. Before leaving for the winter, 2-5 days after the emergence of imagos, when the air temperature exceeds 15.5°C, they start laying eggs [1, 10 pages], egg-laying lasts 7-10 days. It lays 100 to 200 eggs on the tips of tree leaves. The female butterfly lays her eggs on the back of a peach leaf (sometimes on a cherry and plum), on the upper part of an apple and quince leaf, and on the leaves of young peach and pear seedlings. One female butterfly lays up to 200-400 seeds. After 6-8 days, the larvae emerge from the seeds, and after 8-12 days, they gnaw the inside of the young plants and turn into pupae. The larvae of the next generation continue to cause damage in the same way. The incubation period lasts 5-12 days. A generation takes 30 days to fully develop. It gives 4-7 generations in a year, depending on weather conditions. It mainly damages some varieties of peaches, apricots, plums, pears, apples, cherries, quinces and hawthorns. During the infection of peach seedlings, a path of 12-15 cm is opened inside the seedling body, as a result, the seedling withers from the tips, leaves fall, plant growth slows down and bends: In young apple and pear seedlings, the larva penetrates up to 1-2 cm, the affected parts darkens and dries up. One larva can damage 4-5 seedlings. In the case of fruits, the fruit bands cause damage to the next fruits through the surrounding and bands. After harvesting the pods, the larvae move to the seed pods and start infesting the

seedlings again. It is necessary to determine the areas where this pest is spread, to prevent its spread and to eliminate it.

**IDENTIFYING ORIENTAL FRUIT.** Inspection of plantations using pheromone traps is the best way to detect the pest. They should be hung on the crown of trees at a height of 1.5-2 meters, 1 handle is placed for 5 seedlings. The result is monitored every 7-10 days. In order to identify the eastern fruit eater and to determine its distribution areas, a double check is carried out. First inspection: 10-15 days after peach blossom, when the branches have grown 5-10 cm. Second inspection: Infected plants before fruiting, i.e. in mid-July. In the inspection, peach trees are first examined, and then all affected trees. After two full inspections, plant quarantine is selectively checked by the state inspection.

**IDENTIFICATION OF ORIENTAL FRUIT LARVAE.** The first detection of the larvae of the eastern fruit borer is done by cutting open the infected young peach seedlings. Affected seedlings are distinguished by the fact that 1-2 leaves at the tip are withered, dried and bent in three parts. During the second inspection, the fallen fruits of the affected plants are picked and examined, the tree is shaken and the fallen fruits are picked and examined for fruit moth larvae and worms. Larvae found in fruits and seedlings are removed and killed by pouring boiling water over them, fixed in alcohol, a decalone or weak saline solution, and the appropriate label is attached and sent to the quarantine inspection for identification. Other non-quarantine fruitworm species may also be encountered during detection of Oriental fruitworm larvae in fruits. In this case, an identification table is used to determine the species composition of 10 types of fruitworm larvae. To identify trees of the same variety in a large area, one out of every 10 trees is taken and 10% of the area is considered. 25-50% of 3 hectares are seen in villages, and 50-100% of homesteads. Trees are viewed along two diagonals. In regions, 3 hectares (300 trees) per person per day, and 20 plots of land in estates are planned. In order to prevent the spread of the eastern fruit borer, to eliminate its pests, and to reduce its damage, nationwide measures are

implemented. Chemical means should be used in compliance with sanitary regulations.

**PEST CONTROL MEASURES.** Agrotechnical control methods In the fall, the rows are plowed and there are no favorable conditions for wintering. In spring and summer, regular cultivation is carried out and the big lumps between the rows are crushed. A trichogram is used when mass reproduction and spawning begin. Fastening straps to the trunk of the tree. If pheromones are used, the representative of the opposite sex will be trapped. It is necessary to separate the harvested fruits from the healthy ones. Fruits from the areas affected by the Eastern fruit borer should not be taken to other areas, used as fodder or used for making preserves. It is strictly forbidden to dry fruits in the open air.

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