

ACCOUNT OF ENTOMOPHAGE PESTS OF DECORATIVE TREES

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ANNOTATION

This article provides information about the types of parasites, predators and their accounting when carrying out pest control measures in the biocenosis of ornamental trees. This article provides information about the types of parasites, predators, as well as their accounting for pest control and reducing their numbers in the biocenoses of ornamental trees.

Keywords: biocenosis, pest, insect, eggs, aphid, scale insect, predator, entomophage.

The issue of preserving the nature of our republic and improving environmental cleanliness has become one of the leading directions of state policy. Therefore, in recent years, much attention has been paid to plant protection. The flora is considered the most important resource in the life of mankind, which, with rational use, becomes an inexhaustible source of raw materials. Taking into account the limited possibilities of using highly toxic insecticides from an environmental point of view, carrying out research work aimed at solving the above problems is of great scientific and practical importance when carrying out measures to protect ornamental trees in areas with predominantly mountainous and urban dense population, due to their severe damage by pests. Being a kind of pests of ornamental trees, they have their own zone of influence.

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Mealy bugs, scale insects, aphids, weevils, wireworms, as well as their numerous entomophages were found among various pests in mountainous and irrigated areas. Preventive measures against pests of ornamental trees should be of high biological and economic efficiency, environmentally safe and non-contaminating food products with low impact on warm-blooded animals and entomophages. Each pest

in nature has its own parasites and predatory entomophages, which are taken into account in the following order.

Accounting for parasites and predators.

Parasites and predators play an important role in pest control and reduction. Hymenoptera insects parasitize only in the larval phase, while adults lead a free-living lifestyle. They feed on flower nectar, the fluid secreted by insect hosts, and dew drops.

Female parasites lay their eggs in the egg of the insect - "host", and on larvae and pupae they pierce the body with an ovipositor and lay it in it. The larvae that hatch from the eggs develop by feeding on the internal organs of the host and are called endoparasites (internal parasites). These include Trichogramma, a parasite of pests belonging to the Lepidoptera and Hymenoptera families; aphelinus, parasite of blood aphids; pseudophycus, comstock parasite and so on.

Parasites that live on the surface of the host's body.

Usually insect larvae are protected from the external environment. Afitis, false cocoons (aleohara larvae) or their hosts live in crevices, deep nests, curled up in leaves and elsewhere. Larvae of external parasites enter through the wound, piercing part of their host's body, and suck out food from the inside. Most internal parasites become chrysalis inside their host insects. In many cases, the larvae hatch from infected worms, leaving behind the pest's skin. After the larvae feed, they emerge from inside the host's body and turn into cupolas around it.

From predatory insects, ladybugs feed on aphids, others - cryptolemus (*Cryptolaemus montrouzieri* Mols.), Chilocorus (*Chilocorus bipustulatus*), two-spotted chylocorus hyperaspis (*Heperaspis campestris* Hest) with scale insects and mealybugs, point stethorus (*Stethorus runctillum*) with ticks.

The collection of entomophages is carried out in wintering places from early spring. Collecting larvae and eggs of pests in wintering places, a number of parasitic insects can be found in them. Collecting parasites and predators in nature is similar to other methods of collecting insects. When carrying out predictive work, it is necessary to know which parasites and predators live at the expense of existing pest species and what significance they have in maintaining and reproducing their development within the normal range.

In this case, it is necessary to determine the degree of damage to existing pests and the species composition of parasites and predators. It will also be studied what kind of parasites lives in this pest and in what phases it corresponds to their development. In most cases, knowing that a large number of parasites and predators will develop at the expense of a single pest, it is important to remember that the host will match its various phases. One of them is a parasite of eggs, another is a parasite of larvae, a third is a parasite of pupae, and a fourth is of adult insects. The eggs of the winter cutworm infect 2 species of parasites, 9 species of small and medium-sized caterpillars and 13 species of adult caterpillars.

Parasites of scale insects and mealybugs.

Samples are obtained from California, comma, willow, rose and other scale insects, bark and twigs, as well as false acacia and plum scale scales by trimming a thin section of the bark, and branches measuring 10 cm² or 25 cm long are obtained from four different tiers of 10 or 20 trees on each side.

The obtained samples are placed in bags of black material. Parasites hatched from eggs fly into test tubes. The percentage of infested scale insects is monitored until they are completely gone.

Parasites of aphids of fruit trees.

To determine the degree of damage to plants spreading on fruit trees, 200 broods are collected directly from infested and not infested with parasites, and the count is carried out once a week, examining 10-20 samples of trees from four sides. Here infested aphids are easy to identify as their bodies begin to darken and mummify. Of these, the parasites are placed in test tubes to determine the output.

Parasites of larvae and pupae.

Hymenoptera infect small larvae, while flies infect larger individuals. To detect the release of parasites, 50 larvae are collected, which are located on the branches of trees. The larvae are placed in 0.5-liter jars of 25 pieces and observed until they turn into pupae or until the parasites fly out. The larvae are fed daily. During hatching, larvae are also collected from trees 1 time. They are placed in separate jars, and the parasite larvae hatched from them are placed in a test tube and closed with a cotton plug.

Similar methods are used to isolate parasites from the larvae of golden tail, hawthorn and apple moths. Mainly on girdle apple and other fruit trees, the remaining fruit larvae are also collected and placed in separate jars. They collect a total of 500 specimens from at least 20 trees.

Accounting for predatory insects.

To determine the significance of various types of predatory beetles, their number is taken into account every ten days. 40 samples are taken from grain crops on an area of 0.25 cm². These samples are placed evenly and all beetles found in that area are collected and sorted by species. In orchards and woodlands, ladybug offspring are believed to stand out due to the fact that they are quite difficult to collect.

Spend during the initial active movement (1-2 or 3 hours) in search of them in the trees. Because they hide during the daytime. Other species are active from 7 am to 1 pm and from 4 pm to 8 pm.

Table Accounting for the infection of eggs and larvae of insect pests by entomophages

Samples	Total eggs, number, pieces	Including				
		damaged eggs, things		Total larvae	Damaged nye larvae	
	things	things	%	things	things	%
1	2	3	4	5	6	7

Each sample taken must have a label, which must indicate the nearest observation point, district or region of collection, name, patronymic of the collector. The collected data is entered into a table, an example of which was given above. In many cases it is necessary to give an idea for what purpose and in what way the specified plant was collected at the time of harvest.

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