

Damage of Sucking Pests of Trees Belonging to The Salicaceae Family and Fight Against It

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Abstract

World experience shows that the economic damage of pests to horticulture and forestry is growing every year. Today, there are forests in more than 5% of the country. Three-quarters of this is in the deserts and one-third in the mountains [4.5].

Keywords: salicaceae family, nests, faunal expeditions, damage, pesticide.



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I. Introduction

The salicaceae family consists of about 400 species. They belong to 3 genera, one - poplar (*Populus* 25-30 species), the second - willow (*Salix* 350-370 species) and the third - gozenia (*Chosenia* - 1 species). Salicaceae are mainly found in the northern part of the globe and are distributed on the continents of Asia and North America. Scientific sources provide a number of data on the damage of more than 100 (insects, spiders) to the family of salicaceae [3,2].

Materials and research methods. The research was conducted in 2017-2021 on the basis of complex faunal expeditions in the cultural and natural landscapes of the plains, hills, foothills, mid-mountainous regions of the Fergana Valley, forests individually, through recommended observations and experiments in general entomology and agricultural entomology.

In the detection and control of insect species G.Ya.Bey-Bienko (1966), R.A.Olimjanov (1977), I.V.Bandarenko (1986), D.A.Azimov and others used the recommended methods, insect detectors and scientific sources.

II. Results and their analysis

Studies have shown that poplar and willow trees are infested by sucking and gnawing pests. There are more than 30 species of sap in poplars and willows, but during the observations, sap sticks to the plant leaf and is present at the bottom, the same at the top, and on the leaves of some trees can be observed tumors with unique shapes and colors.

Some species of poplar-eating aphids include white hetophos (*Charitophorus albus* Mardv), red-headed sage (*Tetraneura coerulescens* Pass), pear-shaped poplar (*Pemphigus bursalius*), walnut-shaped poplar sap (*Pemphigus lichtensteini*), the fixtures are natural, specific to the same plant, and may be designed to attract insects. There are also cases where various tumors are the product of insect "creation" and serve as a "home" for living.

Typically, such nests are infested with nematodes from the world of equal-winged insects. Insects of this category are adapted to sting-sucking food, and even when the plant stings the tissue, it can send there along with the saliva as various enzymes and biologically active substances, for example, auxin substances that cause tissue hyperplasia or hypertrophy. Under the influence of these substances it is possible to observe the appearance of tumors of different shapes and colors on the surface of the leaves.

The group of equal-winged insects is related to the subspecies of tsikada. According to Dubovsky (1966), 342 species of tsikas were identified in the Fergana Valley, which caused damage to 12 family specimens, and 67 species to forest trees [1]. The type and survival of semi-rigid winged insects are diverse. According to his data, there are more than 700 species belonging to 32 families in Uzbekistan [1]. Shield shackles - *Rhaphigaster brevispinus* and *Aphodiphus integriceps*, as well as blind shackles - *Agnocoris rabcundus* and *Orthotylos diaphanous* are common species in poplar and willow trees.

Chemical insecticides used to protect poplar have been tested in field experiments to determine the susceptibility of poplar cycad to insecticides.

The experiment was conducted in July 2017 in the forestry of Asaka district using a hand-held suspension machine (650 l / ha). The results obtained from the list of insecticides in the experiment are given in Table 1.

Biological efficacy of insecticides against poplar cycads
Field experience, Asaka district 12.01.2019

№	Options	Pure material	Consumption rate, l (kg) / ha	Efficiency, % days:			
				2	6	10	15
1.	Imido, 35% sus.k.	imidacloprid	0.15	96,2	100	100	83,3
2.	Nuker Por, 55% em.k.	chlorpyrifos + tsipermetrin	0,5	89,2	100	91,7	86,2
3.	This too	-//-	0,7	100	100	96,1	80,3
4.	Pirineks, 40,8% em.k	chlorpyrifos	0,5	100	100	96,8	94,2
5.	Killer Super, 20% em.k.	Lyambda-tsigalotrin	0,2	79,2	81,2	84,3	67,1
6.	This too	-//-	0,3	87,7	96,2	97,1	80,4
7.	Control unprotected	-	-	Pest density			
				36,2	41,4	40,1	51,4

Due to the high sensitivity of Poplar tsikada to modern insecticides, the highest and most satisfactory biological effect was obtained during almost 15 days of control. Only, the high consumption rate (0.3 l / ha) of the synthetic pyrethroid - Killer Super - showed satisfactory efficiency.

Conclusion

1. In the Fergana Valley, more than 30 species of sap were recorded in poplars and willows, of which Charitophorus albus Mardv, Tetraneura coerulescens Pass, Pemphigus bursalius, Pemphigus lichtensteini were found to cause severe damage.
2. Rhaphigaster brevispinus, Aphodiphus integriceps, Agnocoris rabcundus, Orthotylos diaphanous species, which are found in vegetative shackles and especially in poplar and willow trees in the conditions of the Fergana Valley, cause serious damage to plant growth in the body by sucking and damaging the body and leaves.
3. Poplar cycad (Cicadellidae sp) is highly sensitive to modern insecticides. - 0.3 l / ha) with high and satisfactory efficiency for 15 days.

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