



ALMOND SUPPLY PESTS AND BIOLOGICAL MANAGEMENT OF THEIR QUANTITIES

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ABSTRACT

The article provides information on the technology and biological effectiveness of entomophagous goldfish in the protection of lice from almond trees in mountainous and foothill areas of Uzbekistan

Introduction. Almond is a tree belonging to the genus Walnut, which has been planted in our country since ancient times. Almonds are widespread in Central America, mountainous regions of China, the Mediterranean, Mongolia, Central Asia. Almonds rank first in the world in the composition of nuts grown in 2019 with a weight of 29.6%. At present, Uzbekistan attaches great importance to the creation of technology for the organization and cultivation of almonds [2,3]. Therefore, the study of the bioecology of pests found in almonds and the development of environmentally friendly methods of their management is one of the urgent problems.

Research methodology. The calculation of infestation with peach lice was carried out on the following scale: low infestation - the pest was recorded in very small quantities around the main core of the leaf; moderate damage - the pest is spread around the main and lateral cores of the leaf; strong damage - distributed in all

cores of the leaf [1, 5, 7]. In the experiments, the degree and percentage of contamination of almonds with peach lice was K. A. Held in the style of Gar [8].

Research results and their analysis. Lice (Aphidinea) are a very common cultural and alien crop pest. They damage almost all agricultural crops.

One of the most serious pests of almonds is peach lice (*Myzodes persicae* Sulz.). The lice were a sucking pest that sucked the sap from the trunk, twigs and leaves of the tree. As a result, the tree becomes weak, the leaves do not curl, the yield decreases, and young seedlings may die. The pest overwinters during the egg-laying period in clusters on the underside of the bark and large branches of the body. In March, the larvae hatch from eggs. Leaves offspring 11 times during the season.

Golden Eye entomophagy is a natural relative of almond lice, and species such as *Chryzopa carnea* Steph., *Chryzopa*



septempunctata W., Chryzopa albolineata L., Chryzopa vittata W. are widespread in Uzbekistan. They usually reproduce by giving 4-5 joints and depend on the type of reproduction, the density of the feeding pests and the natural conditions. In nature, one goldfish larva feeds on 60-70 pests per day [4,7,8]. Golden Eye is an effective insecticide against lice in almonds, and the larvae retain their viability even at high temperatures (35-400S). At present, artificial reproduction of goldfish in biolaboratories has been established and is

being used against many crop-sucking pests. However, the effectiveness of goldfish entomophagy against almond tree sucking pests has not been studied.

Therefore, in the almond orchard located in Jambay district of Samarkand region, the effectiveness of goldfish against lice was studied. In this case, the experiment was performed on the ratio of 1:20, 1:10, 1: 5 to almond bits of gold (table).

1-Table

Effectiveness of applying goldfish larvae against lice on almond tree

ratio of bits	Number of bits on each leaf, pcs					Biological efficiency,%, by days			
	from the traexction of gold	by the days after the gold eye was removed							
		4	7	14	21	4	7	14	21
During the leaf spreading period									
1:20	19,6	17,4	13,8	10,5	7,7	11,2	29,6	46,4	60,7
1:10	20,7	17,4	12,7	9,3	4,8	15,9	38,6	55,1	76,8
1:5	22,4	17,2	12,4	7,5	3,3	23,2	57,6	66,5	85,2
Control	22,8	36,3	41,6	46,2	59,2	-	-	-	-
During the fruiting period									
1:20	25,9	22,1	20,0	15,2	8,7	14,7	22,7	41,3	66,4
1:10	23,4	17,8	14,7	10,8	5,1	23,9	37,2	53,8	78,2
1:5	27,3	20,2	14,9	8,8	3,2	26,0	45,4	67,8	88,3



Control	31,5	39,3	45,3	53,4	66,2	-	-	-	-
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The eggs of the golden eagle, propagated in the laboratory, were placed on the branches of the almond tree in pieces of cloth. During the season, almond leaves are spread and goldfish are distributed during fruiting. Biological efficiency was 85.2% at the time of leaf propagation, 88.3% at the time of fruiting at a ratio of 1: 5, and 76.8 and 78.2% at the ratio of 1:10, respectively. It was noted that when the gold and bit ratio was 1:20, these figures were in slightly lower numbers (60.7 and 66.4%, respectively).

Conclusion. In the conditions of Uzbekistan in the biological control of lice on the almond tree is recommended to use goldfish in a ratio of 1:10 and 1: 5. In this case, the use of entomophagous during leaf propagation and fruiting gives good results. Biologically reducing the harmful effects of almond lice on the morphological organs of almonds is also worth considering from a biodiversity conservation and ecological point of view.

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