
Biological Effectiveness Of The Drug Nurell-Iks 66% Against Hoplocampa Testudinea

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ABSTRACT: This article presents the results of an experiment on the spread, harm, development of apple seedlings in apple orchards grown on the territory of the Republic, as well as the biological effectiveness of chemicals belonging to different classes in the fight against this pest.

KEYWORDS: Apple fruit sawyer, apple orchards, varieties, preparation, biological efficacy.

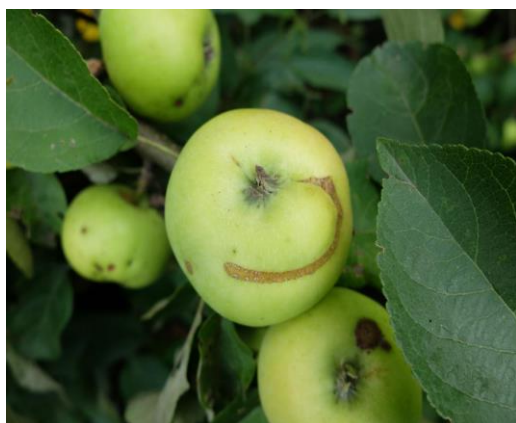
INTRODUCTION

At a time when there is a global change in the climate on earth, a rapid increase in the population, a rapid increase in the production process, a number of problems arise in the food industry, like all industries. In solving these problems, it is possible to solve only through the resources obtained as a result of the creation and introduction of new innovative technologies. Only the increase in the temperature of the Earth's surface in agriculture leads to a sharp

decrease in the possibility of growing crops, and in the solution of these processes it is required to conduct large research.

Having comprehensively analyzed the problems, the distribution of *Hoplocampa testudinea* in fruit gardens in the conditions of the Tashkent region, the degree of harmfulness, the formation of the population, the biological characteristics, the composition of the species of natural mammals, their reproduction, application technologies, the application of agrotechnical measures in the management of the amount of *Hoplocampa testudinea*, the application of new, effective chemical. *Hoplocampa testudinea* adult insect has a length of 6-7 mm, the upper body is Brown, the lower name is yellow. It has two pairs of transparent wings with a network of black veins. The larva is white, has a brown head and 10 pairs of legs. The length of the adult larva reaches 12 mm. In the form of a thick oval, dense oval notch. Larvae hibernate in the soil at a depth of 5-10 cm, sometimes they can be met at a depth of 20 cm in the spring, when the soil at a depth of 10 cm warms up to 10°, larvae grow. Adult insects occur and appear in the buds of apple trees before flowering [1, 2, 5].

It is observed that during the flowering period of the apple tree lay eggs. Early flowering varieties are more damaged by *Hoplocampa testudinea*. Females lay eggs and place them in the ovary. One female lays 50-90 pieces of eggs. After 7-14 days, the larvae leave the egg and enter the Second Harvest, passing directly into the seed chamber and causing damage to the seeds. An adult larva eats all the seeds and completely destroys the seed chamber. Depending on the size of the fruit, each larva can damage the fruit from 3 to 6 soles. Fruits that do not damage the seed chambers usually do not fall apart. In June, the larvae complete their development, leaving their fruit and fall to the ground, where they form a cocoon on dense soil. If there is a lack of moisture, they fall into the state of the range and remain in the soil for up to two years. The damage caused by the apple fruit *Hoplocampa testudinea* is similar to the damage caused by the apple moth (Figure 1).



1-picture. Damage of the fruit in its external and internal form.

(Salar Agromax of Kibray District of Tashkent region f / x 2020 year.)

The difference is that the moth eats a part of the seeds, while the sawdust completely destroys all the seeds [3,4,6].

Object and methods of research. In 2020, the researches were carried out in Salar Agromax F/x apple orchards of Kibray District of Tashkent region, which entered 5 young harvest, "fudji" variety. The drug being tested was applied on 3 return, on an area of 0,5 ha. Methodological applications on "insecticide, acaricide, biologically active substance and fungicide testing" were used in determining the biological effectiveness of the drugs used against pests [7].

Results of the study. One of the effective ways to protect fruit gardens from pests is chemical struggle. Observations were made in order to determine the appearance and development of *Hoplocampa testudinea* in apple orchards grown intensively in the experimental area, as well as the effectiveness of chemical preparations. Against *Hoplocampa testudinea* in 2020 year, the chemical preparation Nurell-iks 66% was tested at a cost-norm of 0,6 l/ha. Nurell-Gold as template 55% feed.the drug k was selected (table).

graph

Biological effectiveness of the drug Nurell-iks 66% against *Hoplocampa testudinea*

Field test-experience, Salar Agromax of Kibray District of Tashkent region f / x 2020 year

№	Options (name of preparations)	Norm of application , l / ha	The average number of fruits counted on a tree, pieces			Worm (infected) fruits, %			Reduction of damage to control, %	
			shed	happening		shed	happening		yield	in total yield
				disconnected	overall		disconnected	overall		
1.	Control (unprocessed)		45,2	210,0	255,2	35,6	5,6	41,2	-	-
2.	Nurell-Gold 55% feed.k (Template)	1,0	46,4	203,6	250,0	5,7	0,9	6,6	83,9	85,7
3.	Nurell-iks66%	0,6	44,7	197,4	242,1	3,4	0,7	4,1	87,5	90,0

According to the results of the experimental test, the drug Nurell-iks 66% against the apple fruit was used in the norm of consumption to 0,6 l/h. if the variant achieved 87,5% efficiency compared to the control on 3 account days, then by 7 account days this indicator was 90,0%.

Nurell-Gold as template option 55% feed. in the variant in which K insecticide was used to spend up to 1,0 l/h, the efficiency was reached 83,9% compared to the control on the 3 Account day, and by 7 account Day, this indicator showed 85,7%. And in the control option, it was observed that the number of pests did not decrease for 21 days. Summing up, high-quality fruit products are preserved from pests when properly used in apple orchards grown intensively, that is, for the specified period and norms, with the drug Nurell-iks 66% (0,6 l/ha), which is used against *Hoplocampa testudinea* in a timely manner.

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