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PLUM FRUGIVOROUS PHEROMONE TRAP RESULTS OF MONITORING

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Abstract
In this article, information on the results of monitoring the development of plum frugivores using a pheromone trap in the conditions of the Tashkent region is presented.

Keywords: Plum frugivorous, pheromone trap, pest, biological efficiency, monitoring.

Introduction

One of the main factors in increasing the productivity of orchards is their protection from pests and diseases (1,3). In the conditions of Uzbekistan, plums are early to harvest. They bloom later than other stone fruits and produce fruit every year. In the cultivation of plums, increasing their yield, improving product quality, and increasing the total yield, the fight against plant pests and diseases is of great importance. In terms of nutrition, plum trees can be found with various groups of arthropods, including leaf, fruit, and root pests. (5). As a result, the damage to fruit trees is increasing day by day. In order to reduce this damage, the bioecology of the main pests of fruit trees is being studied and chemical and biological control measures are being used against them. It is urgent to establish a coordinated, effective system for combating harmful organisms in orchards, conduct monitoring, and prevent the entry and spread of pests and diseases that can cause economic damage to the territory of the republic. (2)

Plum fruit borer. The larvae of the plum fruit borer (Grapholita funebrana) damage plum, cherry, and sometimes gooseberry, apricot, and peach fruits, causing them to fall off. The life cycle of the plum and apple fruit borers is similar in many ways, but the plum fruit borer causes more damage to stone fruits. In most cases, a gummy substance oozes from the damaged area of the plum fruit borer. Often, such fruit rots and falls off. The larvae of the insect live for 4-15 days and usually do not feed. The development period of the larvae lasts 17-30 days. The last young larvae overwinter. The pupal stage lasts 15-33 days. (4)

Experimental methods. In order to determine the biological effectiveness of the plum fruit-eating pheromone trap produced by “ECO CENTER MD” LLC of the Republic of Moldova, experiments were conducted at the experimental site of the Scientific Research Institute of Plant Genetic Resources in the Kibray district of the Tashkent region. The fairy-tale, blue-colored plum (rannaya sinaya) variety was used in the experiment. The “slimovaya plodozhorka” pheromone trap from Industrial filtration solutions, LLC was used as a model. To monitor the pheromone traps, they

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were hung at a height of 1.5 meters from the ground, at a rate of 2-3 per hectare.


Field experiments

Scientific research results. In the conditions of the Tashkent region, control observations were carried out in three repetitions, initially starting on May 5 and continuing until July 5. The pheromone trap produced by ECO CENTER MD, LLC (Republic of Moldova) was hung in a plum orchard at the rate of 2-3 pieces per 1 hectare, and it was found that 12 plum fruit-eating butterflies were caught on 17.05-20.05, and 22 on 29.05-01.06. It was found that an average of 15 butterflies fell on the pheromone traps taken as a standard on 02.06-05.06. The tested variant was more effective than the standard variant. (Table). According to the results obtained, the tested plum fruit-eating pheromone trap produced by ECO CENTER MD LLC of the Republic of Moldova can be used to monitor the pest in plum orchards. It is necessary to continue these preliminary studies and conduct additional studies on the use of pheromone traps in production conditions and in relatively larger strawberry orchards.


Butterflies caught in a pheromone trap

Monitoring can help to collect information about insects that damage plum fruit, such as citrus fruit borers and other pests. Pheromones are used to attract these pests and gather them together, making them easier to track.

Pheromone monitoring results require statistical analysis. If pheromone traps attract a large number of pests at a given time, this may indicate a high pest activity during that period, and

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appropriate action should be taken.

In conclusion, the results of plum fruit fly pheromone trap monitoring are important for optimizing agricultural processes, controlling pests, and taking measures beneficial to the ecosystem. The effectiveness of these methods is also of great importance in maintaining ecological balance.

"Crapholita Protect" pheromone trap attraction (capturing properties) of plum fruit borer results of field observations, 2023.

Options (pheromone traps)	**Repetition**	**Number of butterflies caught on pheromone traps (per 1 trap)**								**Average, pieces**
		1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	
		05.05-08.05	*09.05-12.05*	*13.05-16.05*	*17.05-20-05*	*21.05-24.05.*	*25.05-28.05.*	*29.05-01.06.*	*02.06-05.06.*	
Test										
Crapholita Protect "ECO CENTER MD" LLC, Republic of Moldova	1	0	0	0	12	0	0	0	0	1,5
	2	0	0	0	0	0	0	22	0	2,7
	3	0	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**12**	**0**	**0**	**22**	0	**4,2**
Average 1 f/t., approx.		**0**	**0**	**0**	**4**	**0**	**0**	**7,5**	0	**1,4**
Size										
Slivovaya plodojorka, "Industrial filtration solutions" LLC, Uzbekistan.	1	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	15	1,8
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**1,6**
Average 1 f/t., approx.		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0,6**

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