



Biological Efficiency Of Golden Eye Application Against Lemon

Azizjon A. Khakimov

Scientific Research Center For Plant Quarantine Of The State Plant Quarantine Inspection
Under The Cabinet Of Ministers Of The Republic Of Uzbekistan

Jurabek Nodirjonovich Yakhyoyev

Institute Of Zoology Of The Academy Of Sciences Of The Republic Of Uzbekistan

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ABSTRACT

In recent years, great importance has been attached to the biological protection of plants. Because, no matter how effective the chemical method, it has its own disadvantages. A number of means of this method, in particular, many chemicals are harmful and dangerous to human health, warm-blooded animals and the environment, as well as to all beneficial insects, that is - biological agents. Therefore, in addition to the cultivation of resistant varieties, it is advisable to use the biological method in areas where insects and canals fall.

KEYWORDS

Harm, biology, morphology, generations, larva, entomophagous, biological efficiency

INTRODUCTION

Despite many years of research by our scientists and the emergence of new types of plant protection products, it can be seen that effective methods against some pest species are not effective. In particular, in agriculture, more than 300 species of the genus Hemiptera belonging to the family Aphididae cause

serious damage. Hence, species size management requires the development of effective ecologically safe methods against it. In nature, scientists have not come to a conclusion in the formation of entomophagous and parasitic host relationships. Because each species also has entomophagous species of

phytophagous species, conversely they cannot control the amount of pest even if the species is numerous. Optimal air temperature plays an important role for the development of sapwood and its wild entomophagy (*Chrysopa sarnea* Steph.) However, each species has its own ecological characteristics.

LITERATURE REVIEW

Among the entomophagous, insects belonging to the family of golden-eyed have a special place. To date, 24 species of goldfish have been identified in Central Asia. *Chrysopa sarnea* Steph., *Ch. septempunctata* W., *Ch. abbreviata* Curt., *Ch. albolineata* L., *Ch.* species such as *vittata* W. are common and abundant. The golden eagle and its larvae are reptiles that are extremely reluctant to eat their prey and are



Figure 1. Golden-eyed Egg.

able to move quickly and find agile prey. It is omnivorous and feeds on more than 70 species of arthropods, including 11 species of canes.

Golden Eye lives an active life with sap spread on citrus crops in greenhouses. Each female lays up to 65 entomophagous eggs per day, and 500-750 eggs throughout her life. Gives 4-5 generations in Uzbekistan. The duration of development of eggs varies from 3 to 7 days, depending on the temperature. The larvae develop in 15-28 days, and the fungus in 8-17 days. The developmental duration of a generation is 52 days.



Figure 2. Golden-eyed Mushroom.



Figure 3. Golden-eyed larva.



Figure 4. The image of the golden eye.

ANALYSIS AND RESULTS

We studied its effectiveness in greenhouses, using the golden variety of lemon in the Tashkent variety against aphids. Its effectiveness has been determined by applying Kushanda artificially in different proportions (1:10; 1:15 and 1:30) during the plant's flowering, flowering and fruiting periods.

The results obtained are presented in Table 1. As can be seen from the figures in the table, the biological efficiency of goldfish was significantly higher in all three variants.

In particular, the efficiency during the mowing period was around 70,0-77,8%, with the highest rate (77,8%) being recorded 14 days after the removal when the ratio of goldfish to sap was 1:10.

Table 1
Biological efficacy of Golden eye application against aphids in lemon plant
(“Qibray district 2020.)

Golden Eye: citrus aphid ratio	The amount of citrus aphid on 1 leaf, pcs				Biological efficiency, % (by days)			
	From the goldfish before	Days after the gold eye is removed						
		3	5	7	14	3	5	7
During mating								
1:10	31	11	7,2	4,2	3,8	73,1	87,2	93,6
1:15	29,8	11	11,6	9,8	71	97,1	78,6	84,5
1:20	30,8	14,8	15	11,4	10,4	63,5	73,2	87,3
Control	31	41	56,4	66	91	-	-	-
During flowering								
1:10	31	14	14	11,4	6,8	75,1	79,1	87,4
1:15	31	15	15	13	11	68,2	77,6	85,7
1:20	30,2	15	14,4	17	11	67,3	77,9	80,8
Control	31	47,2	67	91	106	-	-	-
At the time of fruiting								
1:10	31	11	10,8	7	11	68,5	80,7	91,9
1:15	31	17	16	21	12	51,4	71,0	75,8
1:20	30,2	21,6	21	16	14	36,6	61,5	70,6
Control	31	35	56	87	99,8	-	-	-

During the flowering period, the highest rate is 73,5% in the same variant on the 14th day. A similar situation was observed during the

fruiting period of plants. Efficacy decreased slightly when the entomophagous ratio to host was 1:15 and 1:30, and the lowest rate was

recorded in the 1:30 ratio variant, 3 days after cousin release.

At the same time, the biological efficiency was 47,1%, and by the 14th day it had risen to 64,0%. This means that high efficiency can be achieved if the golden eye against the sap is distributed in a ratio of 1:10 or 1:15, depending on the growing periods of the lemon in the greenhouse.

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