

Applications of Grazy Valve in Combating Rusty Mite (Aculops Lycopersici Massee) On Tomatoes

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Abstract: *The main entomophages bred in the biolaboratories of the Republic are the trichogramma, the brakon and the golden-eyed predator. The species composition of zlatoglazok in the entomo fauna of Central Asia is represented by 24 species, of which 11 species are noted in Uzbekistan. The most numerous species are Chrysopaacrona, Chrysopa Septempunctata, Chrysoperla abbera, Chrysoperla all and Chrysoperla vitta.*

Key Words: entomophag, larva, insects, gold-eyed, development cycle, tomato mite, biological efficiency.

Introduction. Notable in the biology of the gold-eyed larvae is the fact that they are very active, have a good search ability. Larvae can feed on more than 70 species of insects and many species of ticks. Overwintered individuals of the golden-eyed common are already found in nature in March, when the average daily air temperature is 10-11°C. During the active development of the gold-eyed eyes, the duration of the embryonic period is 3-7 days, the larvae develop 15-28, and the pupae 8-17 days.

The entire development cycle of one generation takes place within 50-52 days. During the season in Uzbekistan, the gold-eye ordinary develops in 4-5 generations. The technology of mass cultivation and application of gold-eye in open and closed ground conditions has been developed and tested [1]. It was established that seasonal colonization of 2nd instar larvae at a rate of 150-200 thousand hectares against sucking pests on cotton allows reducing the number of pests below the economic threshold of harmfulness [2].

Literature analysis. In order to expand the scope of application of the gilding eyes on different cultures against newly identified pests, such as the rust tomato mite, we conducted a series of experiments to study the effectiveness of the entomophage. Experiments were conducted on f / x. "Sevara breed style" of the Tashkent region on tomatoes of the variety "Uzbekistan-178" populated with rust tomato mite. The golden-eyed larvae were colonized during the budding, flowering and fruiting of tomatoes, with a ratio to the pest 1:10, 1:15 and 1:30.



picture 1. rust tomato mite

table 1.

Biological efficiency of gold-eyed eyes in the fight against tomato rusty mite (Tashkent region, f/x. "Sevara brend style" small-scale plotting experience, 2017-2018)

Options Predator victim	The average number of mites on 1 sheet					Efficiency by day of accounting, in%			
	Before the release of the predator	After the release of the predator, individuals per day							
		3	5	7	14	3	5	7	14
Budding phase									
1:10	30	11	8	4	3	59,6	65,9	73,8	76,7
1:15	30	12	11	10	7	50,7	61,7	70,6	73,3
1:30	30	15	15	12	10	49,0	56,6	68,1	70,0
Control	30	41	57	65	91	-	-	-	-
Flowering phase									
1:10	30	4	14	11	6	50,8	59,1	61,0	74,3
1:15	30	15	15	13	10	49,7	53,6	55,8	62,5
1:30	30	15	15	17	11	48,4	51,8	57,5	60,6
Control	30	48	67	92	106	-	-	-	-
Fetal phase									
1:10	30	10	10	7	10	61,4	63,4	70,0	78,0
1:15	30	17	16	20	13	58,4	61,9	67,2	71,0
1:30	30	22	20	16	14	47,1	54,9	61,8	64,0
Control	30	35	57	88	100	-	-	-	-

Research results. According to the results of the experiments it can be seen that in all three variants of the experiment, fairly high indicators of the effectiveness of using gold-eyed eyes

were obtained. In particular, the effectiveness of gold-eye in the period of budding on the day of counting ranged from 70.0 to 76.7% compared with the control (table 1). Higher biological

efficacy in the variant where the gilding eye was colonized during the flowering

phase of tomatoes was also noted on day 14.



picture 2. imago and gold-eyed larva

With the increase in the load on one larva of the golden-eyed to 15 and 30 individuals of rusty tomato mite, the efficiency decreased to 60-64.4%. In the variants when tomato plants were in the pa phase of budding and fruit formation, there was no significant difference in the ratio of the effectiveness. Thus, it should be noted that the gold-eyed ordinary can be successfully used in the fight against rust tomato mite on tomatoes. The optimal ratio of predator and prey providing the highest efficiency in the period of budding and fruit formation is 1:10. The ratio of 1: 15, 1: 30 is acceptable in the initial period of plant colonization by rust tomato mite.

Summary, suggestions and recommendations. With a high tick population, sometimes the use of the gilding eyes is not justified, and production workers resort to the use of destructive measures, i.e. to the chemical method. Currently there are a number of specific acaricides used in the fight against this tick. However, they do not always give the desired result. In

addition, their use leads to the accumulation of residual amounts of pesticides in the fetal organs, which make it impossible to obtain an environmentally friendly product.

References

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