European Journal of Agricultural and Rural Education (EJARE)
Available Online at: https://www.scholarzest.com
Vol. 4 No. 04, April 2023
ISSN: 2660-5643

DETERMINING THE AMOUNT OF TRICHOGRAMMA GENERATIONS BEING MULTIPLIED IN THE BIOLABORATORY.

Davlatova Feruzahon Anvarovna.
Arslanov Mahammatsoli Turg`unovich.
Andijan Agricultural and Agrotechnological Institute
Sodiqov Murodillo
Senior researcher of the scientific research institute of plant protection

Article history:

Received: 10th February 2023
Accepted: 10th March 2023
Published: 17th April 2023

Abstract:

In this article, experimental work was carried out to determine the application rate for the control of grain moth eggs and for the control of eggs of the cotton bollworm and other insect pests, and it was found that the rate of 5 g. It was found that an additional 0.025 , 0.044, 0.06 and 0.088 g of Trichogramma.

Keywords: eggs grain mole, laboratory, trichogram

Trichogramma breeding has been going on for several decades in the countries of Central Asia. Of course, the purpose of carrying out these works is to reduce the use of chemical means in practice, i.e. in carrying out the work of combating agricultural equine pests.

Trichogramma is mainly used against the eggs of moths and butterflies found in cotton and other crops, and in turn is multiplied in the eggs of grain moth in special biolaboratories. Many authors have provided information on the rate of reproduction of this species. In this case, 1 gram of trichogram damages 5 grams of grain moth. To date, no specialist has raised doubts or objections to this information. In the biolaboratory, the trichogram is placed before fully hatched (70-75%) to damage the eggs of the grain moth. Because trichoramas that have not lost their vitality during the use of trichorama are reused. This work is basically using the trichogram to its full potential, although it takes a little time.

Taking into account the above-mentioned information, in 2022, we conducted experimental work in order to determine which of the trichograms in different weights actually affected grain moths and how the trichograms flew out of them and which of the obtained weights corresponded to our intended goal.

Experiments were carried out according to the methodical manual developed by Shshepetilnikova, Popov, Grinberg and other authors. 5 variants and 4 returns (1, 0.85, 0.8, 0.75 and 0.7 g.) were carried out in carrying out these works.

For this, the template is 1 g. in 70-75% of the hatched trichogram, in the rest of the variants fully hatched (100%), the hatched trichogram was used when infected with grain moth eggs. We know that 1 g. There are 50,000 eggs in a grain moth egg. Taking into account that 1 female trichogram has an average fertility of 60, from which generation of them is 1 g. The possibility of using That is, it is envisaged how much the trichogram of each generation used here will change.

In the first experiment, using the trichogram from the new generation, and the rest of the experiment using the 2-4 generation trichogram, 100 harmful grain moths were first counted with a trichogram, and how many of them were female and male trichogram, and based on the obtained result, the trichogram weight was filled in according to the weight of each generation (1- table).

According to the results of the experiment, the following can be said. In this table, when 1st-generation trichograms were used for grain moth damage in practice, out of 100 trichograms taken for analysis, on average, 97.6 trichograms were found, and 60 were female and 37.6 were male, and the gender ratio was 1:1.6. It turned out to be close to the recommended norm. In the use of the remaining generations, it was found that the amount decreased over time, in the 2nd and 4th generations, it gradually decreased from 95.6 to 91.0 units, and the ratio of female and male genes decreased from 1:1:3 to 1:1.

According to the results of the conducted experiment, the amount of Trichogramma offspring, which are reproduced during the season, has led to a gradual decrease.

1-table.
Determining their quality indicator for the practical use of trichogramma generations.
A scientific educational biolaboratory belonging to AKSHATI.
2022

Versions	The number of eggs obtained, pcs	Flying trichograms			Proportions	Additionally, Compared to the 1st generation	Female tr-mma
		All	♀	♂			
1-generation	100	97,6	60,0	37,6	1:1,6	-	25
2- generation	100	95,6	54,3	41,6	1:1,3	0,3	59
3- generation	100	94,0	50,0	44,0	1:1,13	0,46	100
4- generation	100	91,2	45,6	45,6	1:1,0	0,6	144

In laboratory conditions, when the generations were used alternately, it was observed that their quantity decreased over time and the ratio of sexes also changed.

In addition, it is necessary to fill the trichogram with the amount of them distributed against night eggs. In this case, it is necessary to extract trichograms from the first infected grain moth and take into account their quantity (Table 2)

Table 2 shows the number of trichograms and the ratio of sexes to fill 1 gram of trichogram. Analytical work was carried out on the results of the first table.

In order to bring one gram of trichogram to the norm, it was determined that additional trichogram was used in the first generation at the weight of 0.025; 0.044; 0.06 and 0.088 grams

2-table.
Weighting trichograms by generations
Scientific Central Laboratory of AQXAI (2022).

Versions	The number of eggs obtained, pcs	Flying trichograms				Additionally, Compared to the 1st generation	gender		Weight of trichigramma
		%	pcs	♀	♂		♀	♂	
1-generation	70000	97,5	68250	42042	26208	1750	1094	656	0,025
2-generation	70000	95,6	66920	37876,72	29043	3080	1746	1334	0,044
3-generation	70000	94,0	65800	34939,8	30860	4200	2226	1974	0,06
4-generation	70000	91,2	63840	31920	31920	6160	3080	3080	0,088

This corresponds to the required level of biological efficiency when trichogram is used in practice.

According to the results of the conducted experiment, it is appropriate to pay attention to their quantity and gender ratio when using trichogramma offspring during the season.

USED LITERATURE.

1. Arslanov M.T., Asanov K.A., Rashidov M.I. and the head. Methodical manual for breeding grain moth, Tashkent. 2000.37. p.
2. Metodicheskie ukazaniya po massovomu razvedeniyu i primeneniyu trichogrammy dlya borby s vreditelyami selskohozyyastvennyx kultur. shchepetilnikovoy V.A. Gusev G.V., Tron N.M. Moscow, "Colossus", Tashkent, 1978.