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Determining the Timing of Cotton Pest Control

Shokirova G. N.
Doctor of Philosophy in Agricultural Sciences (PhD) Teacher

Mamarasulov J. O.
Assistant, Ferghana State Universiti, Ferghana, Republic of Uzbekistan

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Abstract: *the article under discussion depicts the importance of determining scientifically sound terms in the fight against a cotton butterfly scoop. There is an effective processing time for any pest control. The authors of the article believe that in order to establish these deadlines, we must study a number of biological patterns and characteristics. When conducting a chemical fight against pests of cotton, namely against scoop butterflies, it is recommended to use chemical insecticides approved by the Republican Chemical Commission in a scientifically based, time- efficient manner.*

Keywords: *term, effect, butterfly scoop, fight, cotton, pests, chemical, growth, processing.*

Researchers have established deadlines in scientific research in the field of control of cotton pests that can be used to achieve great effect only if the deadline is respected [1, 2].

According to the theory (taking into account that insecticides are less effective for adult butterfly larvae of scoops), chemical control with insecticides is used when each generation of cotton nocturnal moths lays eggs on a plant (when 1-3 year worms can appear from the first laid eggs) the maximum biological effect is possible.

The problem is connected with the target issue. The controller (or farmer) may not notice the moments of development of the pest butterfly, he will notice the seriousness of the situation only when adult worms and complications in the bark and in the buds of cotton appear in the field.

To prevent and avoid this case, wisely using the field pheromone (FT) “alarm” signal, conduct additional field observation and evaluate the situation that appears.

On average, from 15 to 20 butterflies fall into the FT over the course of a few days overnight, which requires preparation for chemical treatment in the field. Now this work can be done in a scientifically sound time frame and can serve as a guarantee of high efficiency.

Fig. 1. Processing with a tractor sprayer

Fig. 2. Larvae of newly hatched eggs

Fig. 3. Adult larvae

Fig. 4. Hormonal insecticides

Some drugs (especially hormonal insecticides) can be very effective in controlling adult larvae (Fig. 4).

As an example, the results of conducted field experiments are considered. In June 2015, two field experiments against the first generation of butterfly pests were carried out on the cotton fields of the "Sokhibjon MMM" farm of Tokhtaboev SMS, Toshlok District: the first was conducted in June 17, the second in June 28, spraying was carried out using an OVX-28 tractor sprayer.

As a preparation, Vertimek (0.45 l / ha) was used against the butterfly scoops, and Avount (0.4 l / ha) against adult larvae. The third option is the control (untreated). The results are presented in the table.

As can be seen from the experiment, spraying with acariinsecticidal Vertimek during scientifically-based periods turned out to be effective, but spraying carried out in disturbed periods (June 28) gave an unsatisfactory result. In contrast, Avaunt (0.4 l / ha), it showed a good biological effect in both periods.

Biological effectiveness of insecticides against cotton pests in processing time

Table 1. Field experiments, Ferghana region, Toshlok region, OVH-28 (300 l / ha), 2021

№	Options	Drug consumption rate l (kg) / ha	The number of butterflies per 100 plants									Effective days,%			
			Before spraying					After processing							
				Larva											
			eggs	total	I-II	III-IV	V-VI	3	7	12	17	3	7	12	17
Scientifically-based work carried out -17.06															
1.	Vertimek 1,8%	0,45	14	8	6	2	0	4	3	4	4	78,0	73,2	78,0	16,6
2.	Avaunt, 15%	0,4	12	7	4	2	1	2	1	1	2	78,0	89,9	82,1	52,4
3.	Control	-	14	10	8	2	0	13	14	8	6	-	-	-	-
The work was carried out in violation of the deadlines-28.06															
1.	Vertimek 1,8% .	0,45	1	16	6	5	5	11	10	8	6	25,6	37, 5	31,8	-
2.	Avaunt, 15%	0,4	0	17	8	6	3	5	4	5	5	68,5	76,5	59,9	-
3.	Control	-	2	15	8	4	3	14	15	11	9	-	-	-	-

Conclusion

When conducting chemical control of pests of cotton, namely, against scoop butterflies, it is recommended to use chemical insecticides approved by the Republican Chemical Commission (List, 2013) in a scientifically based, highly effective time frame [5]. This is the key to biological, economic and economic productivity.

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