

G'O'Za O'Simligida "Promayt 73 % Ek (Propargit 730 GI)" Akaritsidining Tetranychus Urticae Zararkunandasiga Qarshi Biologik Samaradorligini Aniqlash

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Abstract: Cotton is the most important crop among fiber crops, which is why this crop is grown in many areas in Uzbekistan. Cotton fiber grown in Uzbekistan is highly valued for its quality and has a place in the world market. In order to grow cotton and obtain high yields from it, it is necessary to apply effective agrotechnical measures, as well as timely protection of this crop from harmful organisms. According to data, if a cotton plant is infected with a spider mite during the germination period, 30-40% of the crop can be lost if timely control measures are not carried out. This article discusses the application standards of Promayt 73% k.em acaricide against spider mite, one of the most dangerous pests of cotton plants, which is very important for agriculture around the world, its test results and the biological effectiveness of the drug.

Keywords: Cotton, acaricide, tetranychus urticae Koch., biological effectiveness, cotton fiber.



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INTRODUCTION: In recent years, due to global climate change, ecological changes have been taking place in our region, including in our Republic, where the air is often dry and dusty. It should be noted that such negative ecological conditions are very favorable conditions for the development and spread of certain pests, in particular spider mites. Cotton is an important strategic crop in our Republic, ensuring the sustainable development of our national economy. Every year, more than 1 million hectares of cotton are planted in our country, producing more than 3 million tons of cotton. To achieve such a high goal, it is always relevant to study and combat the organism of the most dangerous pest of cotton - tetranychus urticae.

Tetranychus urticae, a species of herbivorous mites that is considered one of the most serious sucking pests of cotton, belongs to the invertebrate phylum Arthropoda, class Arachnida, order Mites, family Arachnida, and is widely distributed in cotton fields, causing significant economic damage.[2]

The spider mite settles on the back of the cotton leaf. It wraps the leaf with thin gray spider webs, damaging it. The mite's mouthparts are adapted for sucking. The damaged leaf appears as a brown or reddish spot on the upper surface, and a severely damaged leaf falls off. If measures are not taken to combat the spider mite in June, 30-50% of the crop can be lost.[3]

Tetranychus urticae is a serious pest of cotton, feeding on 248 species of plants. Of these, 37 species are agricultural crops. The spider mite lays up to 160-600 eggs. In Uzbekistan, it gives up to 18-20 generations. Against spider mites, 3-4-day-old eggs of the golden-eyed entomophagous are released twice with an interval of 10 days in the ratio of 1:10, 1:20. In areas where necessary, up to 500-1000 golden-eyed eggs are released; from sulfur preparations that are harmless to the environment and beneficial insects, dusting with sulfur powder at a rate of 20-30 kg / ha, spraying with 0.5-1 l of sulfur with lime at a rate of 300 liters per hectare gives a good effect.[4]

Among the most serious pests of cotton, spider mites (*Tetranychus urticae* Koch.) rank high in terms of damage they cause. Despite the sufficiently in-depth study of this pest and the development of measures to combat it, they require constant improvement.[5]

Forecasting the occurrence of *Tetranychus urticae* in cotton is carried out based on a method developed at the Plant Protection Research Institute. In this case, short-term forecasting is carried out by determining the expected weather temperature by decade and by cotton-growing regions.[6]

METHODOLOGY: Production tests of the Promayt 73% k.em preparation were conducted on cotton varieties Namangan-77 in the experimental fields of the Fergana branch of the Research Institute of Plant Quarantine and Protection in the Baghdod district of the Fergana region. Spraying was carried out in the phase of 3-4 cotyledons of cotton, in the morning at a temperature of 30°C. For the experiment, Promayt 73% k.em was used at a consumption rate of 0.6-0.8 liters, for the standard, Omayt, 57% k.e. was used at a consumption rate of 0.6 liters, and the control variant was not treated.

Experience system

№	Variants	Consumption rate l/ha
1.	Promayt 73% k.em	0,6
2.	Promayt 73% k.em	0,8
3.	Omayt, 57% k.e.	0,6
4.	Control	Not processed

The experiments were conducted according to the existing methodology (Methodological instructions, 2004) and the calculation of biological efficiency was carried out using the Abbott formula (Abbot, 1925).

RESULTS: In the first ten days of August this year, a decrease in temperature and dew on the plants was observed. This led to a natural decrease in the number of spider mites in the garden. Due to the decrease in the number of spider mites on the control plants, the calculation of the biological effectiveness of the drug on the 21st day was not carried out.

As can be seen from the table, the acaricide Promayt 73% k.em. has approximately the same toxicological potential as the control variant Omayt. When this preparation was applied at a rate of 0.6 l/ha, the biological efficacy on the specified days was 46.9% on the first day, 92.6% on the third day, 98.8% on the seventh day, and 93.2% on the fourteenth day. When this preparation was also applied at a rate of 0.8 l/ha, the biological efficacy was 53.0% on the first day, 95.2% on the third day, and 100.0% on the seventh day.

Therefore, this Promayt 73% k.em preparation can be recommended for practical use in production at a rate of 0.6 l/ha-0.8 l/ha.

The effectiveness of Promayt 73% e.m.k. insecticide against spider mites in cotton.

	Variants	Consu	Consu	Number of spider mites on one	Efficiency, %,
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№		mption rate of the drug, l/ha	mption rate of the primer, l/ha	leaf. 1 piece						days:				
				Befor e proce ssing	Days after processing:					1	3	7	14	21
					1	3	7	14	21					
1.	Promayt, 73% k.e.	<i>Propar git 730</i>	0,6	16,4	8,7	1,2	0,2	0		46, 9	92, 6	98,8	100	
			0,8	16,6	7,8	0,8	0			53, 0	95, 2	100		
2.	Omayt, 57% k.e. (etalon)	<i>Propar git 570</i>	1,5	16,1	8,4	0,5	0,1			47, 8	96, 9	99,4		
3.	Control	-	-	16,6	20, 0	25, 2	18, 2	0,2		-	-	-	-	-

DISCUSSION AND CONCLUSION: Promayt 73% k.em pereparadi was effective against cotton bollworm in continuous application at 0.6-0.8 l/ha compared to the control, and according to the results of 4 observations, it had an average effective effect on cotton bollworm at 0.6 l/ha by 82.8%, and at 0.8 l/ha by 85.5%. When Promayt 73% k.em pereparadi was used at the indicated rate, it did not have a toxic effect on the growth and development of cotton. After the cotton bollworm has fallen on the cotton, the major rate of Promayt 73% k.em pereparad at 0.6 - 0.8 l / ha is effective, and when sprayed from the moment the cotton has developed 2-3 cotyledons, up to the combing period, its effect does not negatively affect the growth, development and formation of cotton. According to the results obtained in the production experience, we recommend including Promayt 73% k.em pereparad in the list of chemical and biological protection agents, defoliant and plant growth regulators permitted for use in the Republic's agriculture against plant pests, diseases and weeds, and using it at a consumption rate of 0.6 -0.8 l / ha against cotton bollworm.

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