



## STUDY OF THE EFFICIENCY OF APPLICATION OF THE PREPARATION ABS SUPER V.D.G. AGAINST POTATO MAHE QUARANTINE ON POTATO

Otabek Sulaymonov, Bekzod Sobirov,  
Parvina Nurmakhmadova, Dildora Saypieva

*Research scientific center for plant quarantine of the "Uzstatequarantine" inspection under the Cabinet of Ministers of the Republic of Uzbekistan.*

*ilmiymarkaz@karantin.uz, +998909193034*

Article history:		Abstract:
<b>Received</b>	February 28 <sup>th</sup> 2021	This article provides data on the harmfulness, distribution and lifestyle of the potato moth, which in recent years has been an internal quarantine object in the republic. In order to determine the effectiveness of insecticides against potato moths, at first, observation work was carried out on the basis of sex pheromones. On this basis, in three variants, we tested the preparations ABS Super, 50 g / kg v.d.g., Vertimek 1,8% em.c., The highest efficiency was observed in the variant where ABS Super was used, 50 g / kg in. dg. – 0,14 l / ha. In this variant, the effectiveness was 7 days 89,6%.
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### INTRODUCTION.

In Uzbekistan, potato plantings occupied an area of 74.7 thousand hectares in 2014, and the gross harvest of potatoes amounted to 1643.4 thousand tons. It is the main food crop for the population. The increase in its yield is associated with many factors of agricultural production. The fight against harmful insects is one of them. Common on potatoes, they cause great damage to plant development and, as a result, to a decrease in yield. The most common pest of potatoes in Uzbekistan is the Colorado potato beetle. The various methods of struggle used against it do not always give a quick desired result, and it must be admitted that the chemical method of struggle is still the most cardinal one. A number of negative aspects of this method, during the struggle for an ecologically clean human environment, are reduced with a competent approach to application pesticides. Pesticides used in recent years on potato plantings belong to the groups of the most effective, less toxic and fast-acting drugs. To this end, in 2019, we tested a new preparation ABS Super, 50 g / kg i.d., for the fight against potato moths on potatoes.

### LITERATURE REVIEW.

Potato moth - *Phthorimae operculella* Zell. It belongs to the order Lepidoptera, a family of erythematous moths (Gelechiidae), which is also a quarantine object that has penetrated into the territory of Uzbekistan in recent years (Dushamov, Obidzhanov, 2011, Kimusan 2013). Distributed focal on all continents. In the CIS, they are found in small foci in the south of Russia, Ukraine, and Georgia. In Uzbekistan, it was subject to internal quarantine. The egg is oval, up to 0,3 mm long, up to 0,35-0,56 mm wide, whitish, becomes dark as the embryo develops. The egg shell is almost smooth with a slight reticulation. Eggs are covered with a secret that sticks them to the substrate. Caterpillar 10-13 mm long, yellowish-pink or yellowish-green with a longitudinal stripe in the middle. The pectoral legs are black. Pupa 5,5-6,5 mm long, in a grayish-silvery cocoon about 10 mm long and 4 mm wide. The surface of the cocoon is covered with lumps of earth and debris. Male cocoons are somewhat smaller than female cocoons. In the potato moth, adult caterpillars or pupae overwinter under plant debris in the surface layer of the soil. In storage facilities, it can reproduce throughout the year. Butterflies fly out in early spring and are found in nature until the end of October. They are active after sunset and dawn. Laying of eggs begins one day after mating. Females lay eggs 1-2, mainly on the underside of leaves or stems, tomato fruits, soil, soil, tubers, uncovered by soil, in storage facilities - in the eyes or in places of mechanical damage to tubers. Butterflies live up to three or more weeks and lay eggs after repeated mating, the fertility of one female is up to 200 eggs.

**PLACE OF TESTING.**

Testing of the preparation ABS Super, 50 g / kg i.d. (Agro life science corporation, India) carried out on potato crops, Sayid Zhurakhon Agro Invest, Yukorichirchik district, Tashkent region.

**TEST RESULTS.**

Table 1 shows the results of the treatments with the preparation ABS Super, 50 g / kg i.d. The data for the potato moth are presented. At a consumption rate of 0,14 kg / ha, the drug worked well against larvae, while the biological effectiveness of suppressing larvae on the 1st day after treatment with the drug was 71,2% on day 3 was 85,0%, and the maximum effect was noted on day 7 equaled 89,6% in larvae, in the following days it began to decrease.

**Table 1.**

**Biological effectiveness of ABS Super, 50 g / kg i.d.g in the fight against potato moth on potatoes (farm "Sayid Jurakhon Agro Invest" Yukorichirchik district of Tashkent region. Large-scale plot experience, manual spraying)**

Variants	Consumption rates of drugs, kg, l/ha	Average number of pests on 5 potato plants					Biological efficiency %			
		Before processing	After processing the other day				1	3	7	14
			1	3	7	14				
<b>ABS Super, 50 g / kg w.d.g.</b>	0,14	156	51	32	25	34	71,2	85,0	89,6	82,5
Vertimek 1,8% em.k. (reference)	0,2	163	65	43	36	42	64,9	80,7	85,6	79,3
Control (no processing)		154	175	211	237	192	-	-	-	-

The drug in the recommended consumption rate is not phytotoxic and forms a good working emulsion together with water. According to the test results, ours suggested to the State Chemical Commission of the Republic of Uzbekistan to include the drug ABS Super, 50 g / kg w.d. ("Agro life science corporation", India), in the list of drugs approved for the fight against potato moth at a rate of -0,14 kg / ha, at a rate of consumption of working fluid 250-300 g/l by the method of continuous treatment of plants by spraying.

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