

## USE OF ERACOND BIOSTIMULATION TO INCREASE VITALITY OF MULBERRY SILKWORM

**Ismatullayeva Diloram Adilovna**

Head of the laboratory of SSRI, PhD.

Sokhibova Nigora Sadritdinovna

Tashkent state agrarian university

**Umida Khaknazarova**

Master degree of TSAU

Email: [sokhibova2019@bk.ru](mailto:sokhibova2019@bk.ru)

### **Abstarct:**

Thanks to the reforms carried out in the next five years, the silk industry in Uzbekistan developed rapidly, the production of silk fabric increased 4 times, the export of silk products increased 3.5 times, and the export of silk fabric increased 50 times. We can see that as a result of feeding with leaves sprinkled with Eracond biostimulation, the viability of worms was 13.4% higher in foreign hybrids than in the comparator, and 27.7% in local hybrids.

**Key points:** mulberry silkworm, vitality, nuclear polyhedrosis.

The development of silk production in the republic has an ancient and extremely interesting history, for example, there is evidence that the practice of silk spinning existed in the Fergana Valley in the south of Uzbekistan, as well as at the source of the Zarafshan River, 4000 BC. years ago. Its rich traditions, climate, population density, as well as the abundance of culinary resources in the countryside make it a very promising area for investment.

Uzbekistan ranks third in the world in terms of raw silk production and accounts for about 2% of world production.

Thanks to the reforms implemented in the next five years, the silk industry in Uzbekistan developed rapidly. In 2016-2020, the production of silk gauze increased 4 times, the export of silk products increased 3.5 times, and the export of silk gauze increased 50 times, which ensured that Uzbekistan took the 6th place in the world in this regard.

The development of the silk industry in our republic and the production of abundant and high-quality cocoons from silkworms are closely related to the prevention of silkworm diseases. The quality of the seeds prepared from silkworms reared in farms is considered an important factor in preventing the spread of diseases and producing high-quality cocoons [2].

The incubation period of jaundice consists of two stages. The first virions leave the polygon

and enter the cell, and in the second stage clinical symptoms of the disease are formed [5].

When the virus is in a latent state, it does not harm insects, does not show visible signs of the disease, that is, transphase-vertically passes from the larval stage to the imago stage [7]. Various negative physical and chemical effects weaken the activation of the latent virus of the worm. The insect becomes infected and dies and spreads the infection horizontally, eventually leading to their death during the feeding period [4].

Under a microscope, because the polygons strongly refract light, they look like oil droplets, which are difficult to distinguish from many oil globules without an expert. But because polyhedra have more faces than fat globules, they can be seen by turning the microscrew of a microscope. If you look closely, the periphery of polyhedra is brighter and less dense than the center of consistency [3], [8], [6].

According to the above authors, the activation of latent infection can be caused by high or low temperature during the feeding period of the worm house, high humidity, very dense arrangement of worms, poor quality feed, physical and chemical effects. Such reasons may be related to the hot and cold effects of long-term (more than 120 winter days) storage of mulberry silkworms in freezers.

According to some data, some protein and enzyme preparations (alkaline and pancreatic DNAs, pepsins) cause activation of yellow disease viruses in buds of mulberry silkworm US-1 breed and US x B-2 hybrid. The frequency of induction, indicating the percentage of death of worms, was 26.5-24.5% in the first case, and 58.1-47% in the second case.

In their research, the scientists of the Research Institute of Sericulture obtained information about the positive effect of lysine and methionine amino acids in increasing the cocoon productivity and fully expressing the genetic potential of the sire and mother breeds intended for repeated feeding of the mulberry silkworm [1] .

Worms, cocoons and butterflies of domestic (Ipakchi 1 x Ipakchi 2) and imported (Haoyue Jingsong) Chinese hybrids of silkworm served as the research material. The drug Eracond was tested in experiments. Incubation of seeds and feeding of live worms were carried out in accordance with the agrotechnical rules for white cocooning breeds.

Data on biological indicators collected during the care of mulberry silkworms are presented in Table 1.

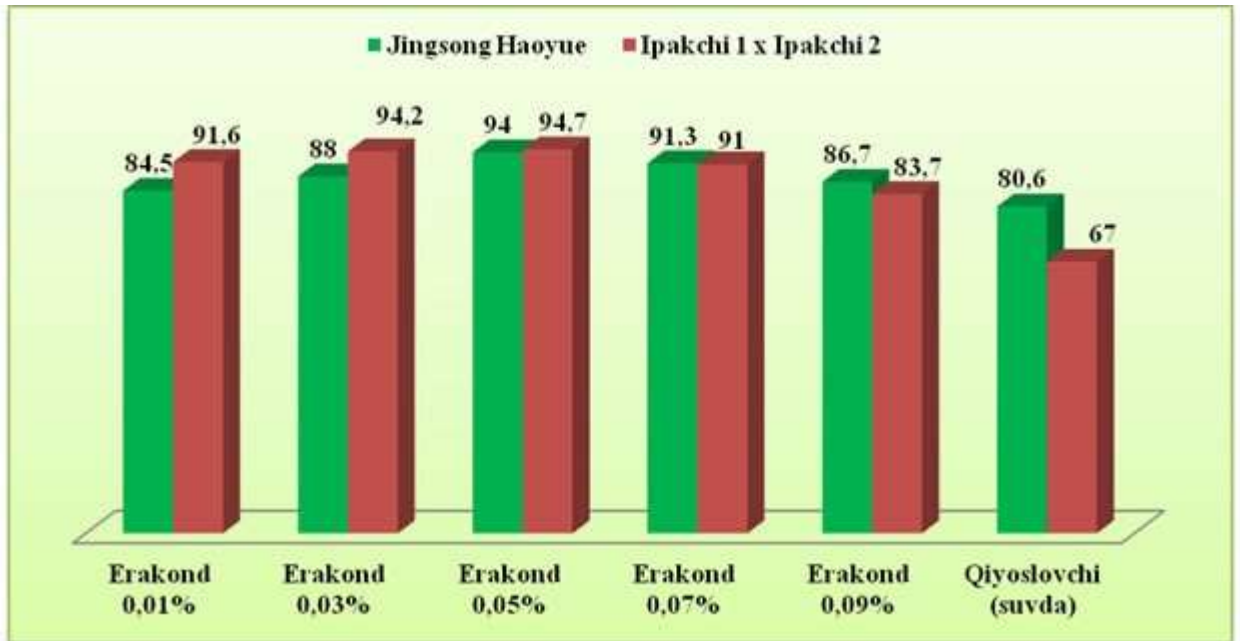
**Table 1**

Biological parameters of mulberry silkworm (average of 3 replicates)

№	Options	Chinese hybrid Jingsong Haoyue		Local hybrid Ipakchi 1 x Ipakchi 2	
		Silkworm death, %	Silkworm vitality, %	Silkworm death, %	Silkworm vitality, %
1	Eracond 0,01%	4,8±0,17	84,5±0,5	1,1±0,11	91,0±0,6
2	Eracond 0,03%	3,7±0,17	88,0±0,75	0,9±0,36	94,2±0,4
4	Eracond 0,05%	2,2±0,09	94,0±0,86	0,6±0,11	94,7±0,5
5	Eracond 0,07%	3,6±0,22	91,3±0,91	3,8±0,16	91,0±0,9
6	Eracond 0,09%	5,2±0,07	86,7±0,77	5,0±0,14	83,7±1,7
7	Comparator (in water)	8,2±0,05	80,6±0,63	10,4±0,23	67,0±0,6

According to the data presented in Table 1, the death of worms due to nuclear polyhedrosis disease in experimental variants of foreign hybrid silkworms under the influence of cold induction was 2.2-5.2%. In the comparative version, 8.2% was determined. When comparing the results of the study with the comparator, it was confirmed that it decreased by 6.0-3.0%. The viability of these silkworms was 84.5-94.0% in the experimental variants, and 80.6% in the comparative variant. In this indicator, it was found that the viability of worms increased by 3.9-13.4%.

It was found that the mortality of worms of the local hybrid of mulberry silkworm was 0.6-5.0% and against it was 10.4% in the comparator. The average difference in this indicator was marked by its high level, that is, it was 5.9-9.8%. The viability of silkworms was 83.7-94.7%, and in the comparative version it was 67.0%. The difference in this indicator was 16.7-27.7%.



**Figure 1. Indicators of the viability of worms**

According to the above data, as a result of feeding silkworms with leaves sprinkled with Eracond biostimulation in order to increase their viability during the larval period, the viability of silkworms was 13.4% higher in foreign hybrids compared to the comparator, and 27.7% in local hybrids. we can

In conclusion, it was proved that the leaves treated with Eracond biostimulation during the worming period of mulberry silkworm increased the viability of worms, the number of healthy cocoons, the mass **of cocoons, and the spread of diseases during worm care was not observed.**

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