

## PESTS OF BEE IN THE FERGANA VALLEY AND MEASURES TO CONTROL THEM

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**Abstract:** This article highlights the main pest threat to beekeeping in the Fergana Valley and how to combat them . The area's agroclimatic properties, biological threats, and their control will be analyzed in this article.

**Introduction .** Beekeeping is a village farm, an important network, not only for honey and other products , but also for crops and pollination, which contribute to productivity. It also has unparalleled importance in increasing productivity. However, in recent years, the Fergana Valley has seen a negative impact on bee activity, with pests increasing in number. This situation poses a serious threat to beekeeping productivity and the environment.

1. **Varroa destructor (tick Varroa )**. This is the most dangerous pest, as the bee clings to the body, causing hemolymph to cling to them . Varroa's presence in the colony reduces immunity , and viral infections will develop, leading to the death of the entire colony.
2. **Acarapis woodi - ( bee tracheal mite)** This is a microscopic arachnid pest of bees breathing on roads living, their breath take This complicates the task. bees activity acute weakens .
3. **G alleria m ellanella ( Linnaeus , 1758 )**, Greater wax moth , Achroia Gris ella ( Fabricius , 1794) Small wax moth, **some** large insects - ants and wax moth larvae bee life nest breaks, wax and food book there is It goes. This bees another to the place forced to move does .
4. **Entomopathogenic fungi and bacteria** in the Fergana Valley are relatively humid areas where fungal diseases (for example, nosematosis apis (bees)) have an impact on the body and their internal decomposition processes in the organs are accelerated .

In our study, we used these plants to combat the varroa mite, a bee pest, given their medicinal properties. For this purpose, we used tobacco leaves and stems. The leaves and stems were dried in the shade, crushed, and made into a powder. The tobacco powder was used to relieve external itching. He also used smoke .

For this purpose, 3 experimental groups were formed, each of which contained 10 bee colonies .

Information on this issue is presented in Table 2 below .

Table 2

### 5. Effect of tobacco and sedge on Varroa mites (n:10)

Groups	Mite infestation rate per 100 bees		
	Honey production-	Honey production-	Winter-to
			to

		to ( X ± Sx )	after ( X ± Sx )	( X ± Sx )
1.	Control group Control, in %	8.4 ± 0.16 100.0	6.8 ± 0.75 100.0	8.4 ± 0.31 100.0
2.	First experience Compared to control, in %	4.6 ± 0.28 54.7	3.8 ± 0.31 55.8	2.8 ± 0.32 33.3
3.	Second experience Compared to control, in %	3.9 ± 0.34 46.4	3.1 ± 0.31 45.5	1.7 ± 0.26 20.2

Above As can be seen from the table data , bees pests In the second experimental group, tobacco dust and bee smoke were used simultaneously . Thanks to the combined treatment, the mite infestation rate per 100 bee bodies before honey extraction was 3.9±0.34, or 78.9% lower than in the control group. After honey extraction, it was 3.1±0.31, or 45.5% lower than in the control group, and before wintering, it was 1.7±0.26, or significantly lower than in the control group. In the first experimental group, these indicators were: before honey extraction - 4.6 mites per 100 bee bodies, after honey extraction - 3.8 mites, and before wintering - 3.1 mites.

For two years, bees use acaricidal preparations obtained from plants. The effects of wintering on bees were studied. Although the mite infestation rate per 100 bees was 1.7–2.8%, the amount of food consumed in the experimental groups, calculated based on passages between frames, did not exceed 1.4–1.5 kg and was reliable. These data are presented in Table 3 .

Table 3

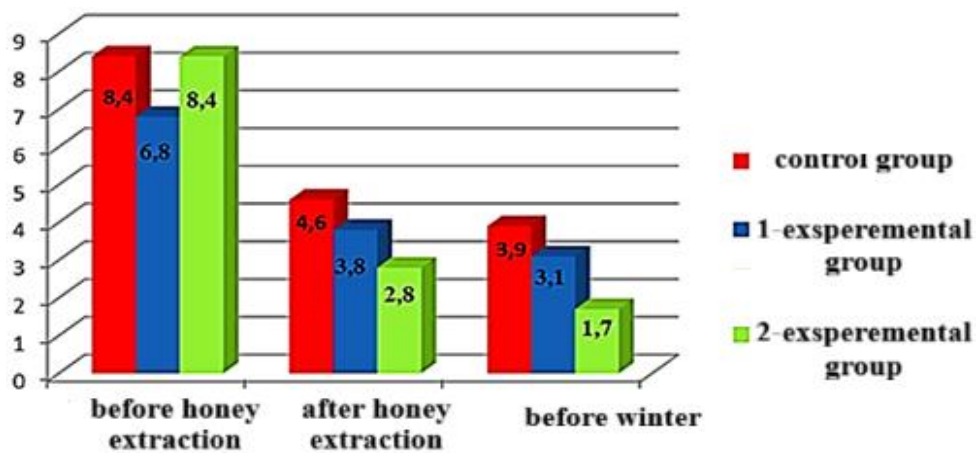
**Impact on the wintering of a bee colony**

t/r	Indicators	Control group ( X ± Sx )	The first experimental group ( X ± Sx )	The second experimental group ( X ± Sx )
1.	The degree of infestation of 100 bees with mites (in %) Compared to control, in %	8.4±0.31 100.0	2.8±0.38 33.3	1.7±0.26 20.2
2.	The strength of a bee colony before wintering (along the corridor) Compared to control, in %	6.1±0.07 100.0	7.2±0.08 118.0	7.8±0.08 127.8
3.	Feed consumption by bee colony (kg)	12.4±0.23	10.8±0.17	10.8±0.66

	Compared to control, in %	100.0	87.1	87.0
4.	Feed consumption per strip (kg)	2.0±0.03	1.5±0.04	1.4±0.02
	Compared to control, in %	100.0	75.0	70.0
5.	Beekeeping production during the winter period (kg)	0.47±0.01	0.24±0.01	0.21±0.01
	Compared to control, in %	100.0	51.0	44.6
6.	Spring Raised Offspring (in square feet)			
	Compared to control, in %	76.1±1.30	106.7±1.29	116.9±1.01
		100.0	140.2	153.6

As can be seen from the table data, bees overwinter During the beekeeping period, the output of bees was insignificant, the difference in the experimental groups was 0.21-0.25 kg or 51.0 and 44.6%, by spring the amount of sealed brood in the bee colony was 53.6% more, and in the experimental groups 40.2-53.6% more than in the control . definite .

Thus, when tobacco powder and silymarin smoke were used together against bee mites, they were found to be very useful and reliable, requiring little labor and expense, and were most effective in killing mites that are pests of bees, 3.9 to 1.7 times more often than other treatment methods (see Figure 2).



Varroa itch plant tick effect diagram

Above is a picture of the data visible as usual , Varroa tick honey from extraction to control, and in the 2nd experimental group, every 100 bees averaged 8.4 units, compared to 6.8 units in the 1st experimental group. The tick was identified. Honey was extracted from the division, then again. When the control group was completed, the largest number was 4.6 units, compared to 3.8 units in the 1st experimental group, and 2.8 units in the 2nd experimental group. This situation was identified. Since winter, previously treated data and plants under the influence of their number changed while standing. Specifically, in the 2nd experimental group, this indicator was strong, and from winter to every 100 bees in the body, 1.7 grains were extracted. This

indicator was achieved in the control group compared to 20.2%. This is , of course, an effective way to combat varroa tick in the fight against tobacco and itching. The plant is effective against smoke because this provides evidence .

### **Conclusion**

Fergana in the valley bees pests against in the fight only chemical to tools rely on enough no . Biological methods, ecosystem-based individual management strategies, and beekeepers' ongoing knowledge can only increase and reduce threats through this process. Pests can be identified in a timely manner and complex measures can be used to develop healthy and effective beekeeping.

### **Used literature :**

1. . Khabibullaev F.N. In the world of bees . Practical recommendations. – Fergana , "FGU Nuskha " multiplication department " , 2024. 52 p.
2. Khabibullaev, FN . Fergana Valley: Bee Family, Typical Biology // Food Security: Global and National Issues Collection of scientific papers of the V international scientific and practical conference. Samarkand , 2023 , October 13-14 , pp. 121-124 .