EFFICIENCY OF PREPARATIONS USED AGAINST VARROATOSIS IN BEE-KEEPING FARMS

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Abstract. *In this article, the results of the conclusion on methods of diagnosis, treatment and prevention of the structure of varroa destructor, the causative agent of varroatosis disease of bees, are presented in the laboratory.*

Keywords. *Weakening of the family, adult bees, maggots, milk-white, worker bees, Varroa destructor, protonymph, deutonympha, Bisanar Amitraz-125, spraying.*

Enter. of the President of the Republic of Uzbekistan dated February 8, 2022 In the decision PQ-120 "Development of the beekeeping network in the 2022-2026 program for the development of the livestock industry and its industries in the Republic of Uzbekistan, management system, monitoring and statistical base of the beekeeping network within this priority direction" will be improved, and it was decided to introduce effective work organization mechanisms, linking the beekeeping sector with other sectors of the agricultural sector. Special attention is paid to adapting the quality of honey produced in the country to the requirements of international standards. Effective mechanisms for improving bee breeding and product quality, combating diseases and pests are introduced in the network [1].

Within the framework of this priority, the management system of the beekeeping network, monitoring and statistical base will be improved, and the introduction of effective work organization mechanisms will be established, linking the beekeeping sector with other sectors of the agricultural sector.

Special attention is paid to adapting the quality of honey produced in the country to the requirements of international standards.

To achieve these goals, the following tasks are defined:

- increasing the volume of production of beekeeping products by using intensive technologies in beekeeping;

- the application of measures aimed at the further improvement of breeding work in the beekeeping network, the "Protected areas of breeding mother bees" measure on the import of "Karpat" and "Karnika" bee breeds adapted to the conditions of Uzbekistan and their breeding - implementation of activities;

- commercialization of the field due to the systematic introduction of agrotechnology of bee pollination of agricultural crops;

- to consider the issue of canceling the current standards for artificial honey products and to develop regulations aimed at strengthening the consumption culture in order to further increase the importance of natural honey in human health [1.2].

During the fulfillment of the priority tasks set for the development of the beekeeping network, we can encounter various infectious, invasive and other non-infectious diseases in several beekeeping farms. To take a simple example, the varroatosis disease of bees caused by the varroa mite is a serious invasive disease of adult bees, maggots and fungi, which causes the appearance of injured, flightless males and bees, the weakening of bee families and a disease that kills them.

The female Varroa mite is brown in color, slightly rounded on the shoulder, 1.1×1.5 mm in size. Its body is covered with hairs, it has a sucking mouth apparatus, and it has 4 well-developed legs. It feeds on the hemolymph of bees, for which it pierces the chitin shell of maggots and adult bees.

Male is milky white or slightly yellowish, length 0.8-0.9 mm, width 0.6-0.9 mm, non-feeding [2].

Eggs of the varroa mite are oval in shape, clear, after 2 days a protonymph with 4 pairs of legs emerges from the egg. The mite's 3-pair larva develops inside the egg.

Female protonymphs develop for 5 days, male protonymphs for 3 days, and protonymphs develop into deutonymphs, and both male and female deutonymphs develop into adults within 1-2 days. The full development of female mites takes 8-9 days, and the development of male mites takes 6-7 days [3].

One bee can have 10 or more mites on its body. During the winter, female mites remain on the bees, as a result, some of them die and fall to the bottom of the beehives, while the rest hibernate.

Several methods are used to determine the level of varroa mite infestation of a bee colony throughout the year. In spring, summer and autumn, the apiary is inspected, attention is paid to the cages of sealed worker bees and male bees [4].

Research object. Orzikul Baba's beekeeping farm in Gulabad village, Nurafshan MFY, Bakhmal district, Jizzakh region, was selected as a research object. Carpathian and Karnica bee breeds are raised on the farm. In this farm, we conducted preliminary research by observation method. As a result of observations, we can see varroa destructor mites in the chest of worker and male bees, the abdomen of worker and male bees is smaller, the wings are deformed.

Cases of bee disturbance were observed. It was found that there were dead bees at the bottom of the hives. At the bottom of the hives, 50 dead bees, 50 flightless bees, and waste from the bottom of the hives were sampled for laboratory testing. This apiary was seriously affected by varroa mites. The litter material from the apiary was brought to the "OPTA-TECH" laboratory of the "Poultry, fish, bee and fur animal diseases" department of the Samarkand State Veterinary Medicine University of Animal Husbandry and Biotechnology. As a result of the laboratory tests, it was found that there were varroa mites when the waste on the white papers placed under the frames was checked on the glass of the product.

For the fight against Varroa mites, we have separated 2 groups from the bee farm. In the first group, the experiments were conducted in the afternoon when the bees were in the hive at a temperature of at least 100 C. First, 2 ml of Bisanar preparation was dissolved in 2 l of warm water and mixed until a colorless solution of the same color was obtained and sprayed in a thin stream between the frames. The hives were closed and the results were analyzed on paper within 4 days.

In the first half of the day, we conducted experimental work for the second experimental group. In the experiment, two families were selected and cardboard plates 1.5 cm wide and 5 cm high were made to them.

4 drops (0.33 ml, 1 drop) of Amitraz-125 drug against parasites of bees were dripped and hung between the frames. White paper soaked in glycerine was placed under the frames and the nests were covered. After 4 days, the papers under the frames were taken and sent to the patmaterial laboratory, the results were analyzed.

At the end of the experiments: After using experiment 1, we saw that the Varrao mites were killed by up to 75%.

After conducting the 2nd experiment, we witnessed the death of Varrao mites up to 60% (Table 1).

From the results of treatment of varroatosis of Carpathian and Carnica bee breeds Table №1

Summary. In conclusion, if timely preventive measures against varroa destructor mites are not carried out in beekeeping farms, the farm will suffer great economic losses. If Varroa destructor mites are not treated in time, the productivity and reproduction of bees will be seriously damaged.

2. The effectiveness of the Bisanar drug was monitored in experiments. Interchanging all drugs at the same time does not allow adaptation to any pathogen. During each season, it is necessary to carry out measures to fight against invasive diseases in bee farms. only then bee farms can be used efficiently.

	Group name	Used preparations	Methods of using drugs	Time of drug administration	The results obtained
1	**Experiment 1**	Bisanar	Spray with a thin stream between the frames	Air temperature is at least above 100 C	85% in family 1 90% in family 2
2	**Experiment 2**	Amitraz-125	4-5 drops on cardboard papers	In the first half of the day, there are few bees in the nest	90% in family 1 98% in family 2

References.

1.Mirziyoyev Sh.M. “O‘zbekiston Respublikasida chorvachilik sohasi va uning tarmoqlarini rivojlantrish bo‘yicha 2022-2026 yillarga mo‘ljallangan dasturi” 2022 yil 8-fevral PQ-120 sonli qarori.

2.O ‘zbekiston Respublikasi Prezidentining qarori 8-fevral 2022 PQ-120. “Asalarichilik tarmog‘ini yanada rivojlantish. Ushbu maqsadga erishish uchun qo‘yilgan vazifalar”.

3. Nasimov.Sh.N. va boshq. “Asalari kasalliklari va zararkunandalari” o‘quv qo‘llanma, Fan ziyosi nashriyoti, Toshkent -2021.

4. Xaqberdiyev P.S., Qurbonov F.I. Qarshiyeva V.Sh “Baliq va asalari kasalliklari” Toshkent -2016 yil “Navro‘z” nashriyoti.

5. O.A.Maxmadiyarov “ASALARICHILIK” fanidan amaliy mashg‘ulotlar uslubiy qo‘llanma Toshkent, “Fan ziyosi” nashriyoti, 2022.