

DIAGNOSES, PREVENTION, AND TREATMENT OF ROTTING DISEASE AND ASCOSPHEROSIS INFECTION OF HONEYBEES IN ANDIJAN REGION

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<https://doi.org/10.5281/zenodo.10667176>

Abstract. Taking this into account, this article describes in detail the causes, spread, diagnosis, preventive measures, and effective methods of treatment of diseases such as sack rot and ascosphaerosis, which cause a lot of damage in beekeeping farms in Andijan region.

Keywords: sack rot, ascosphaerosis disease, bees, in bee larvae, queen bees, male bees, frames.

Introduction. Diseases of bees have been known since ancient times, in the 4th century BC, Aristotle wrote about it. P.I. Prokopovich also mentioned some information about rotting diseases. Only in 1906, the American scientist G.F. White, after his microbiological examination of rotting disease, found the microorganism that causes this disease, Bacillus larvae, and called the disease American rotting disease. In 1910, Europeans discovered rotting disease and determined that the microorganism that causes it is B. Plutonium. After consistent investigations by White, in 1912 he discovered the disease of bursitis, and determined that a filterable virus caused it.

The occurrence of infectious diseases in bees depends on many reasons. In such an epizootic situation, the level of infection of bees with infectious diseases specific to a certain area is studied.

Therefore, bee diseases should always be studied and, if necessary, treated. If the disease occurs, it is necessary to take measures to combat it quickly bee rotting disease. Bag rot is an infectious disease spread by viruses, which can pass through any, very small filters. Older larvae and mushrooms are infected with this disease.

When dead larvae are picked up by the head, they appear to form a fluid-filled sac filled with a granular fluid. The disease occurs mainly in the first half of summer. It is widespread in all regions of our republic. Also, this disease is 14.3% in the bee farms of Andijan region.

The causative virus *Morotor uetatulae* Holmes passes through any filters, is resistant to the external environment and dies after 5-7 hours in such an environment. Honey and glycerin die in 10 minutes when heated at 70-73°C, and water at -59°C. It can be stored at room temperature for up to 3 weeks. Direct sunlight kills in 4-7 hours. It dies after 3-5 days in 10% fermented sugar juice at room temperature, after 3 weeks in 2% phenol solution. Viruses live in pollen for 105-110 days. Epizootic data. The source of disease transmission is diseased larvae and their corpses. Young bees are the ones who spread the disease inside the hive, because they are infected with viruses during the cleaning of the cells. Bees spread honey and pollen from the field to their hives when they are feeding them. It is passed from a sick family to a healthy family by the transfer of bee frames, with beekeeping tools, with thieves and stray bees.

In bag rot disease, the bee brood is discolored and the closed brood caps are sunken and torn. Because the same frame contains healthy, diseased and dead larvae, these frames appear in different colors. Dead larvae are stretched along the cage wall, with their heads slightly raised. The body of the dried larvae turns into a dark brown shell and is easily removed from the cells. Dead larvae are odorless.

Passing the disease. The disease-causing virus mainly affects the larvae. The incubation period is 5-6 days. The virus enters the larva's body through food and multiplies. As a result, it spreads throughout the body through the hemolymph. The fat body of the larva enlarges, the nucleus and cells take on an incorrect shape. Degrading tissue and blood cells become granulated. This disease, like the European rot disease, appears in late spring and the first half of summer and can last until the end of August. Especially when the bee colony is cold and there is not enough food, the disease is more severe.

Disease diagnosis. The diagnosis of bursitis is based on virological tests and clinical symptoms. Therefore, samples are taken to bacteriological laboratories for examination.

Preventive measures. It is mainly based on keeping a strong bee colony in the apiary. It is also desirable to have a good supply of honey and pollen, shorten the hive and heat it.

Countermeasures. Quarantine is declared for the area infected with bag rot until they are cured. In order to limit the queen from laying eggs, she is put in a cage for 5-7 days. Infected beehives are removed, beehives are replaced and the door is disinfected. Weak families are united. Old rums are melted down to obtain wax, along with infected offspring.

Beekeeping tools, metal objects and hives are disinfected with 3% nirtin solution or 4% hydrogen peroxide solution. For this, 500 ml/m² solution is used every 3 hours.

Treatment juices are prepared by adding 500,000 BR of oxytetracycline and chlorine tetracycline drugs to 1 liter of juice to treat the disease. Or take biomycin, tetrocyclyne or terrromycin in 500,000 BR, mix well, and sprinkle 150-200 ml of treatment juices on one bee corridor 3 times, 1 time every 7 days.

Ascospheiosis disease or bee brood thickening.

In the bee family, worker, male, queen bee larvae and cones are often infected. The causative agent of the disease is an ascospheric fungus. It affects 3-4 day old larvae. Infected larvae harden like mummified corpses, like lumps of chalk or lime. Therefore, their second name "hardening of offspring like chalk" comes from this word.

The fungus is resistant to the external environment and remains viable for up to 15 years. He lived at a temperature of 270 for up to 1 year. Fungal spores can live up to 4 years in an empty apiary, frames, beekeeping tools and equipment, as well as in honey and pollen in apiary conditions. Fungal spores are also highly resistant to chemical drugs. -1% formaldehyde solution kills it in only 20 minutes, 1% hydrogen peroxide in 30 minutes, and 3% chlorine lime and hypochlorite in 10 minutes.

Epizootic data. Ascospheiosis disease is widespread in our Republic. In particular, it is common in the Ferghana Valley, where there is a lot of irrigation (Denisov.S.A. 2004). The source of the disease is the family of sick bees, as well as infected honey and pollen, thieves and stray bees. Spores of the disease are brought to the hive by collecting nectar and pollen from flowers. Ascospheiosis often appears in spring and summer, when bees have the most offspring in the family. Then the open and closed offspring are mummified, and the larvae are wrapped in fungal

spores. Gray moldy caps form on the rear end of the dead larva. Damaged larvae do not stick to the walls of the frame cells, they are easily removed.

The course of the disease. The spores of the fungus fall into the guts of the larvae with the food of the bees. First, fungal mycelia develop in the larval body, the epithelium of the midgut, and then the spores occupy the body from the head to the end. Even when the cells are covered, the mycelia of the fungus grow and break through. When the larva is fully infected, it dries up and hardens into a chalky mass. When the fungus produces fruit, its body takes on a gray or dark color. As the bees remove them from the cells, they turn light. Bordinyu are plastered with propolis by bees, they get a brown color. Bees infected with the fungus are highly mobile and quickly weaken and die. If you press such a bee on the infected abdomen, it will be hard as a rock.

Disease diagnosis. A bee family infected with fungal spores is diagnosed based on clinical symptoms and the results of mycological examinations.

Preventive measures. It is necessary to always place the bee colony in dry and bright places, to keep a strong colony of bees, to warm them well and to provide them with quality food. Countermeasures. From the family of sick bees, infected brood and moldy rums are taken and melted to obtain wax. The rest of the frames are transferred to clean sterilized beehives. New heating pads and blankets are placed in the beehive, the hive is heated, good quality feed is provided, weak families are strengthened and the beehive is reduced. Additionally, sugar syrup is served. All beekeeping tools are disinfected. A temporary quarantine will be announced against the disease.

Treatment works. Nystatin is used to treat ascospherosis.

Nystatin antibiotic, an amorphous substance, yellow or gray in color, bitter taste, specific smell, powdery, does not dissolve well in water, the tablet is released in 250 thousand BR. One rum is given to bees with sugar syrup or pasty sugar feed at 100 thousand BR. In the spring, more than 50 gr. of each bee is given to rum with juice or sugar. When given by spraying, 200 g of sugar is added to 1 liter of water. The powder can also be given by pollination. Treatment is given every 3-5 days.

Conclusion. Beekeeping is one of the most profitable branches of agriculture. Taking this into account, this article describes in detail about the disease of sack rot and ascospherosis, which cause a lot of damage in beekeeping farms in the conditions of Andijan region, their origin, spread and effective methods of diagnosis, preventive measures and treatment.

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