

## ANALYSIS OF SOIL NEMATODES OF PLANTATIONS GROWN IN MELILOTUS OFFICINALIS DESCR.

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### АННОТАЦИЯ

Лекарственные растения являются основным сырьем для фармацевтической промышленности. Изучение почвенной фауны, состава почв и правильная организация оптимальных почвенных условий для растений являются важными факторами получения высоких урожаев для фармакологии от различных видов лекарственных растений. Лекарственные травы (*Melilotus Officinalis* Descr.) используются в медицине как смягчающее и смягчающее действие (рассасывание ран). На плантациях, засаженных *Melilotus Officinalis* Descr. , различные микроорганизмы, бактерии и почвенные нематоды оказывают существенное влияние на рост, развитие и урожайность растений. *Melilotus Officinalis* Descr. в окультуренных полевых почвах в фауне нематод преобладают корни растений и нематоды, обитающие в почве вокруг корней.

**Ключевое слова:** нематоды, почва, лекарственные растения, сапробионты, сельское хозяйство.

### ANNOTATION

Medicinal plants are the main raw material for the pharmaceutical industry. The study of soil fauna, soil composition, and the proper organization of optimal soil conditions for plants are important factors in obtaining high yields for pharmacology from various types of medicinal plants. Medicinal herbs (*Melilotus Officinalis* Descr.) Are used in medicine as a emollient and effects (wound absorption). In the plantations

planted in *Melilotus Officinalis* Descr., various microorganisms, bacteria and soil nematodes have a significant impact on plant growth, development and yield. *Melilotus Officinalis* Descr. in cultivated field soils, the nematode fauna is dominated by plant roots and nematodes found in the soil around the roots.

**Key words:** nematodes, soil, medicinal plants, saprobionts, agriculture.

According to the data of the World Health Organization, 60% of the available medicines are preparations obtained from the raw materials of medicinal plants. Currently, 112 types of medicinal plants are used in official medicine in the Republic of Uzbekistan, and 80% of these medicinal plants are naturally growing plants. Medicinal plants growing naturally have a limited supply of raw materials, and their protection, study of their bioecological properties, proper use of raw materials and development of scientifically based methods of reproduction are considered urgent issues. It is an important issue to study the soil fauna of fields planted with medicinal crops.

**Material and method.** Parasitologist use different methods to extraction nematodes from soil and plants. Plant parasites are not only found in roots but also in tubers, bulbs, stems, leaves, and seeds. There are Baermann funnel method, Funnel spray method, Blender nematode filter method. The Baermann funnel is used for extraction of nematodes from plant material and soil. Baerman funnel method has advantages and disadvantages. In the experiment, the soil was taken from the Medicinal Plant Garden, Khiva, Khorezm Region. Firstly, a soil sample was taken from the four corners and the middle of the place where *Melilotus Officinalis* Descr was planted. *Melilotus Officinalis* Descr. planted soil was digged in 3 different sizes (0-20 cm, 20-40 cm, 40-60 cm). And than soil samples were measured from 10 gr. Secondly, the funnel placed and filled it with water until it reaches up to  $\pm 1$  cm below the rim. Next, we hang the soil the cheesecloth with the sample in the funnel so that the sample is totally submerged, without touching the bottom of the funnel. Samples for nematode extraction were kept in nesting for about 24-48 hours. And than the

sedimented nematodes were transferred to 4-5% formalin to preserve the original. Glass test tube was filled with 40% formalin, and the tube was reached with the collection of nematodes collected before the clamp. Labels with information about the samples collected in the test tubes were removed and closed with a plastic cap. Nematodes were placed under a microscope with an entomological gripper. Finally, structure and classification of nematodes were studied.

**Results.** 34 species belonging to 11 families, 28 genera nematodes isolation of *Melilotus Officinalis* Descr. nematodes from in experiment. Based on the ecological classification of A.A.Paramonov and in addition to it, based on the systematics of O.Z.Metlitsky , T.V.Volkova phytonematodes of medicinal plants were divided into the following 4 groups: pararhizobionts, eusaprobionts, devisaprobionts and phytoelmints. Pararizobionts or phytonematodes around the root divided classification of nematodes into ecological groups based on the types of damage caused to plants. Live in the soil around the nematodes were associated with the plant root system. Phytonematodes were eaten plant juice with stilet.

**Conclusion.** *Ditylenchus dipsaci*, *Pratylenchus pratensis*, *Helicotylenchus multicinctus*, *Paratylenchus hamatus* isolated from soil *Melilotus Officinalis* Descr. There are parasitic nematodes and widespread in cultivated areas.

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