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BIODIVERSITY OF LUMBRICIDAE INTERMEDIAL HOSTS OF METASTRONGYLIDES OF PIGS IN THE BELGRADE AREA

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Abstract: Metastrongylidosis or pulmonary strongylidosis of pigs is a disease caused by several species of nematodes from the genus *Metastrongylus*. Metastrongylides belong to biohelminths whose causative agents use transitional hosts for their development and maintenance of the biological cycle, in this case numerous species of lumbricids (earthworms). Overview of research conducted in the five-year period in the area of Belgrade it was established that the dominant species of earthworms which are intermediate hosts to lungworm from genus *Eisenia*, *Dandreobena*, *Allopbophora*, *Lubricus*, *Octolasion* and *Heledrillus*

• Introduction

Metastrongylidosis or pulmonary strongylidosis of domestic and wild pigs is a disease caused by 6 species of nematodes were found in this genus: *Metastrongylus elongatus*, *M. pudendotectus*, *M. salmi*, *M. confusus*, *M. madagascariensis* and *M. tschiauricus*. The most susceptible to infection are young pigs aged 2-8 weeks. The occurrence of infection is dominant in environments where extensive animal husbandry (herding, discharge housing) and housing hygiene are practiced. Metastrongylides belong to biohelminths, the causative agents of which use transitional hosts for their development and maintenance of the biological cycle, in this case numerous types of lumbricids - earthworms

• Material and method

During the study of the biodiversity of pulmonary strongylids of pigs in extensive farming in the territory of Serbia, carried out in the period 2008-2015, earthworms, potential transitional hosts, were also examined. Study of the biodiversity of pulmonary strongylids and its intermediate hosts in the Belgrade area was carried out as a continuation of these studies and performed in the period 2015-2018. Earthworms were determined based on morphological characteristics

• Results and discussions

Drinig examination in various part Serbia including Belgrade area these are the dominant species of earthworms: *Eisenia foetida*, *E. rosea*, *E. veneta*, *Dandreobena rubida*, *Allopbophora caliginosa*, *A. jassyensis*, *A. longa*, *Lubricus terrestris*, *L. rubbelus*, *Eisenella tetraedra*, *Octolasion lacteum*, *O. complanatum*, *O. rebeli*, *Dendrobaena octaedra*, *D. subrubicunda*, *D. mariupoliensis*, *Bimastus tenius* and less species from the genus *Heledrillus* sp.

Earthworms are most abundant in moist and loose soil that is rich in humus and animal waste, where hundreds of earthworms per m² can be found. Seasonal variation of microclimatic conditions in the soil has a large role in the life of earthworms and inhibitory factors in their seasonal dynamics are directly related to the spread of metastrongylidosis.

In worms, the larvae are localized in the walls of the blood vessels of the esophagus and the foregut. Here, they change their clothes twice and in 10-25 days they develop into an infectious form. Pigs become infected orally when they eat infected earthworms. From the pig's digestive tract, the larvae reach the mesenteric lymph nodes, where they molt. and reach the bloodstream and lungs via the right heart via the lymphatic system. In the bronchi and bronchioles, the larvae reach the adult stage

