



Technical University of Moldova

**STRONGYLOIDIASIS IN HORSES – CLINICAL,
PARACLINICAL AND THERAPEUTIC ASPECTS**

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Chisinau, 2026

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII AL REPUBLICII
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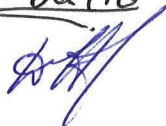
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**STRONGYLIDOZELE LA CABALINE –
ASPECTE CLINICE, PARACLINICE ȘI
TERAPEUTICE**

Teză de absolvire a studiilor superioare integrate
Specialitatea 841.1 Medicină Veterinară

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Chișinău, 2026

MINISTRY OF EDUCATION AND SCIENCE OF THE
REPUBLIC OF MOLDOVA

Technical University of Moldova
Faculty of Veterinary Medicine
Department of Food Safety and Public Health


Admitted to defense
Head of Department:
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PARACLINICAL AND THERAPEUTIC ASPECTS**

**Diploma Thesis at the End of Integrated Higher Education
Specialty 841.1 Veterinary Medicine**

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Chisinau, 2026

ADNOTARE

Autor: **FUDI Yazid**

Tema: **Strongylidozele la cabaline – aspecte clinice, paraclinice și terapeutice**

Locul și anul perfectării tezei: **Chișinău, 2026**

Structura și conținutul tezei. Lucrarea este alcătuită din 50 de pagini de text principal și cuprinde următoarele capitole: Introducere, Sinteza bibliografică, Materiale și metode de cercetare, Rezultatele cercetărilor, Concluzii, Recomandări și Bibliografie; 13 figuri, 10 tabele și 4 diagrame.

Lista de referințe constă din **49 surse bibliografice**

Cuvinte cheie: cabaline, strongilidoze, diagnostic coproparazitologic, dehelmintizare, eficacitate terapeutică.

Scopul cercetărilor Evaluarea prevalenței strongilidozelor la cabaline, a particularităților clinice și paraclinice ale infestației și determinarea eficacității terapeutice a preparatului Brovermectin gel.

Obiectivele lucrării au inclus: Studiarea situației epizootologice, efectuarea examenelor coproparazitologice, identificarea speciilor de strongili, determinarea intensității și extensivității invaziei și evaluarea eficacității tratamentului antiparazitar.

Rezultate: În urma examinării a 50 de cabaline din cadrul Școlii Republicane de Hipism și Pentatlon Modern din Chișinău au fost identificate infestații cu strongili mari și mici. Extensivitatea invaziei pentru strongilii mari a fost de 53,33%, iar pentru strongilii mici de 26,66%. Tratamentul cu Brovermectin gel a demonstrat o eficacitate extensivă medie de 96,72% și o eficacitate intensivă medie de 98,22%.

Concluzii: Strongilidozele reprezintă o problemă importantă de sănătate la cabaline. Examinările coproparazitologice și programele strategice de dehelmintizare permit controlul eficient al infestațiilor. Brovermectin gel s-a dovedit a fi un preparat eficient în combaterea strongililor la cabaline.

ANNOTATION

Author: **FUDI Yazid**

Topic: **Strongyloidiasis in horses – clinical, paraclinical and therapeutic aspects**

Place and year of thesis completion: Chişinău, 2026

Structure and content of the thesis: The paper consists of 50 pages of main text and includes the following chapters: Introduction, Literature Review, Research Materials and Methods, Research Results, Conclusions, Recommendations, and Bibliography; 13 figures, 10 tables, and 4 diagrams. The list of references consists of 49 bibliographic sources.

Keywords: horses: strongyloidiasis, coproparasitological diagnosis, deworming, therapeutic efficacy.

The aim of the research To evaluate the prevalence of strongyle infections in horses, describe their clinical and paraclinical characteristics, and assess the therapeutic efficacy of Brovermectin gel.

The objectives of the thesis included: To investigate the epizootiological situation, perform coproparasitological examinations, identify strongyle species, determine the intensity and extensiveness of invasion, and evaluate the effectiveness of antiparasitic treatment.

Results: A total of 50 horses from the Republican School of Equestrian Sports and Modern Pentathlon in Chisinau were examined. Infections with both large and small strongyles were identified. The extensiveness of invasion was 53.33% for large strongyles and 26.66% for small strongyles. Treatment with Brovermectin gel showed an average extensive efficacy of 96.72% and an average intensive efficacy of 98.22%.

Conclusions: Strongyle infections remain an important health problem in horses. Coproparasitological examinations and strategic deworming programs are essential for effective parasite control. Brovermectin gel proved to be highly effective against equine strongyle infections.

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INTRODUCTION

Equine breeding is a major sector in animal husbandry, with significant economic, sporting and recreational implications, and maintaining their health is a priority for modern veterinary medicine. Among the diseases that frequently affect equines, digestive parasites occupy a central place, both through their high prevalence and through their negative impact on the performance, welfare and longevity of the animals (Matthews, 2014; Taylor et al., 2016, Dumitriu, A. et al., 2023, 2024. 2025).

Strongyloidiasis is the most important gastrointestinal helminthiasis in horses, caused by nematodes belonging to the Strongylidae and Cyathostominae families, with a wide distribution worldwide (Love et al., 1999; Kaplan & Nielsen, 2010). These parasites are found in both sports and draft horses, regardless of the breeding system, but with a higher incidence in farms where pasture management and deworming programs are inadequate (Nielsen et al., 2012).

Historically, large strongyles (*Strongylus vulgaris*, *Strongylus edentatus* and *Strongylus equinus*) have been considered the main etiological agents of strongyloidiasis, due to extensive larval migrations and severe vascular lesions produced, especially by *S. vulgaris*, responsible for verminous arteritis and thromboembolic colic (Duncan, 1974; Bowman, 2014). With the widespread introduction of effective antiparasitic agents, the prevalence of large strongyles has decreased significantly, and the clinical importance of small strongyles (*Cyathostominae*) has increased considerably (Love et al., 2000; Nielsen et al., 2013).

Currently, cyathostominosis is recognized as the most common and problematic form of strongyloidiasis in horses, due to the ability of the larvae to enter hypobiosis in the intestinal mucosa and to cause severe clinical forms through massive synchronized emergence (larval cyathostominosis), associated with chronic diarrhea, weight loss, edema and, sometimes, high mortality (Murphy & Love, 1997; Matthews, 2014).

The pathogenesis of strongyloidiasis is complex and depends on the species, the intensity of the infestation, the evolutionary stage of the parasite and the immune status of the host. The lesions produced include inflammation of the intestinal mucosa, hemorrhages, absorption disorders, anemia and metabolic changes, which can be objectified by hematological and biochemical paraclinical investigations (Taylor et al., 2016; Nielsen & Reinemeyer, 2018). In many situations, infections are subclinical, but cause economic losses by decreasing performance and increasing susceptibility to other diseases.

The diagnosis of strongyloidiasis in horses is based on the correlation of clinical data with paraclinical methods, in particular quantitative coproparasitological examination (egg count per gram of feces – EPG), coproculture for larval differentiation, as well as modern immunological and molecular methods, used for research purposes or in selected cases (Kaplan & Nielsen, 2010;

Nielsen et al., 2014). However, the interpretation of the results should be done with caution, considering that the level of egg excretion does not always reflect the actual parasite load or the severity of the lesions.

Treatment of strongyloidiasis is based on the use of antiparasitic agents from the benzimidazole, macrocyclic lactone and tetrahydropyrimidine classes, administered according to schedules adapted to each farm (Taylor et al., 2016). However, the frequent and often uncontrolled use of these products has led to the emergence and spread of antiparasitic resistance, a phenomenon widely reported in cyathostomines and, in some regions, even in *Strongylus* spp. (Kaplan, 2004; Nielsen et al., 2019).

In this context, the modern approach to strongyloidiasis in horses involves the implementation of strategic deworming programs, based on parasitological monitoring, active substance rotation and appropriate pasture management, with the aim of reducing selection pressure for resistance and maintaining the effectiveness of available treatments (Kaplan & Nielsen, 2010; Nielsen & Reinemeyer, 2018).

Purpose of the work is to carry out an updated synthesis of data from the specialized literature on strongyloidiasis in horses, highlighting the clinical, paraclinical and therapeutic aspects of these parasitosis, as well as the importance of correct diagnosis and integrated management in infection control and prevention of antiparasitic resistance.

In order to achieve the proposed goal, the paper proposes the following objectives:

- presentation of clinical and paraclinical diagnostic methods used in veterinary practice;
- analyzing the effectiveness of the main classes of antiparasitic substances and their mechanisms of action;
- discussing the phenomenon of antiparasitic resistance and modern prevention strategies;
- highlighting the role of pasture management and strategic deworming in the control of strongyloidiasis.

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