

**PREVALENCE OF PARASITICAL INFESTATIONS  
IN SHEEP FROM THE DIDACTIC STATION OF THE  
UNIVERSITY OF AGRICULTURAL SCIENCES AND  
VETERINARY MEDICINE OF IAȘI, DURING 2003-2005**

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**ABSTRACT** – *The parasitological cases were monitored in sheep from the Experimental Didactic Station of the University of Agricultural Sciences and Veterinary Medicine of Iași, during 2003-2005. Cestode (Thysaniezia giardi), trematodes (Dicrocoelium lanceatum), nematode (Trichostrongyloidea/Trichostrongylidae family, Dictyocaulida family; Metastrongyloidea/Protostrongylidae family) and arthropods from Arachnida classes (Acari subclass) and Insecta caused the parasitoses diagnosed in that period. Every year, psoroptic scabies has affected sheep during stable period, when the lowest temperatures of the season were reached. Grazing after the prophylactic autumn disinfection developed a trichostrongyli population in the body of hosts, which was sufficient to pollute grassland and perpetuate parasitosis. The interruption of biological cycle by adult or one of the intermediary host systematic destroying has resulted in the diminution of dicroceliosis incidence*

**Key words:** sheep parasites, Merino de Palas breed, disinfection

**INTRODUCTION**

Parasitism is a phenomenon often found in sheep, especially in sheep grazing on grasslands, because of prehension specific features and of the presence of carnivores, which may become definitive hosts for some parasites. The damages caused to sheep by parasites result in number diminution of sheep or yield quantitative decrease, starting from 5-7% in case of ectoparasitoses until 30-40%, or even more in case of endoparasitoses (Bowman et al., 2003; Miron, 2002; Șuteu, Cozma, 2004). Starting from these considerations, we have been

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monitored the parasitical cases in sheep from the University Farm since 2003 and tried to establish correlations between the parasitism phenomenon and environment conditions, in order to find a more efficient strategy for controlling parasitoses.

## MATERIALS AND METHODS

The monitored animals have been clinically studied each month. The studied parameters were management state, physiological constants, integrity of pilous layer in milking sheep – average milk yield. Every month (sometimes bimonthly), faeces were sampled and analysed, and when it was necessary, dermal curetting was carried out.

## RESULTS AND DISCUSSION

The Experimental Didactic Station of Iași has 96 sheep belonging to Merino de Pallas breed, managed under traditional system, together with 322 sheep of a private farmer. They are bred on grassland found in hilly area at North of Iași City, with low moisture and a flora made up of wild grasses. Grassland is bordered at West by Mârzești forest, at South by Breazu locality, at North by Zootechnical Farm no.2 of the University of Agricultural Sciences and Veterinary Medicine of Iași, and at East, by Zahorna locality.

*Tables 1, 2 and 3* present the main parasitoses identified in sheep from the Experimental Didactic Station of Iași, according to years, months and age categories.

**Note:** in most of cases (excepting the episodes of psoroptic scabies and sheep louse infestation), the paraclinical identification of a parasite has preceded the appearance of clinical signs.

**Table 1**

**Main parasitoses diagnosed in sheep  
at the Experimental Didactic Station of Iași, in 2003**

Month		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Age category	Lambs												
	Ewe lambs												
	Rams												
	Adults												

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Table 2

Main parasitoses diagnosed in sheep at the Experimental Didactic Station of Iași , in 2004

Month		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Age category	Lambs				■		■		■	■	■		
	Ewe lambs	■			■	■	■		■	■	■		
	Rams				■		■		■	■	■		
	Adults				■		■		■	■	■		

Table 3

Main parasitoses diagnosed in sheep at the Experimental Didactic Station of Iași , in 2005

Month		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Age category	Lambs					■	■	■		■	■	■	
	Ewe lambs		■	■	■	■			■	■	■	■	
	Rams				■	■			■	■	■	■	
	Adults				■	■			■	■	■	■	

Key:

■	Psoroptic scabies
■	Sheep louse infestation
■	Coccidiosis
■	Cestode infestation
■	Trichostrongyloses
■	Dictiocaulosis
■	Dicroceliosis
■	Albendazol disinfections
■	Ivermectine and chlorsulon disinfections
■	Parasitological cases = 0

Each year, psoroptic scabies has affected sheep during the stable period, when the lowest temperature of the season was reached. In 2004, November and December were unusually warm months, low temperatures being registered at the end of January and in February 2005, which coincided with the moment of appearance of clinical cases of psoroptic scabies (*Table 2*).

In spring, sheep louse infestations (especially with *Dermacentor marginatus*) took place at the same time with trichostrongylosis infestations, but egg of nematode infestation was very low. No clinical cases appeared in sheep. Long autumns and first months of winter without snow and positive temperatures made that the period of grazing be extended until December or January; animal reinfestation with trichostrongylosis was possible after disinfections from October or

November. Infestations during summer were strong, the increase of egg and lpg for *Dictyocaulus filaria* in autumn determining the need of disinfection.

Cases of coccidiosis in lambs were relatively few, generally 2-3% of the flock. Infested lambs have been isolated in separated boxes with their mothers and have been treated individually with sulfaquinoxalin 20%.

Cestode infestation (especially *Thysanitiesia giardi*) has constantly appeared after the beginning of lamb grazing. The lambs who have shown clinical signs (diarrhoea, weight lose, swelling, anaemia, colic, and proglottis in faeces) have been recovered very difficultly, the weight differences being of minus 25-30% in September. In 2003, the covering period was delayed with two weeks, resulting in later lambing; lambs began to graze at the end of May. The first clinical cases have been registered in June (*Table 2*). Late lambing made that sheep louse disinfection be done very late, in June, when most of acarids have already left the animals. In the spring of 2005, sheep louse infestation was stronger than in the previous years; over 70 sheep louses under different development stages have been sampled from one adult, in the sternum-abdominal zone.

Dicroceliosis had a low presence in this study. Chlorsulon associated with ivermectin, was used for anti-parasitical treatments, having a great contribution to this problem. The low pathogenesis of trematode and negative temperatures registered in the last winters have significantly diminished the gastropods population from the grazing area and have systematically destroyed the anthills. Faeces samples were positive for *Dicrocoelium* only in adult sheep, in 2004 (*Table 2*), the explanation being that milking sheep made up a separate flock and rams, ewe sheep, lambs and sterile sheep, another flock, each of them having different grazing places.

Weak infestations with *Melophagus ovinus* have been found in certain lambs.

## CONCLUSIONS

Applying antiparasitical treatments, adapted to the ecology of each parasite and real climatic conditions made that, with time, grassland pollution with parasitical elements and, implicitly, the incidence of parasitoses in sheep diminish.

Lamb anoplocephalidoses are constantly present, lamb recovery by treatment after the presence of clinical signs being difficult, that is why disinfection must be applied compulsory at about one month after the beginning of grazing.

Every year, psoroptic scabies has affected sheep during stable period, when the lowest temperatures of the season were reached.

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Grazing after the prophylactic autumn disinfection develops a trichostrongili population in the body of hosts, which is sufficient to pollute grassland and perpetuate parasitosis.

The interruption of biological cycle by systematic destroying of adult or one of the intermediary host has resulted in the diminution of dicroceliosis incidence.

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