

## **DEVELOPING A TREATMENT SCHEME TO CONTROL ENDO-PARASITES DISEASES IN SHEEP - first part -**

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### ***Abstract***

*In general, through the influence of the environment on the leaving organisms undergo morphological changes more or less accentuated. Parasitism offers the most typical example that shows precisely the changes bodies depending on the environmental conditions.*

**Key words:** sheep, internal parasites, treatment.

### **INTRODUCTION**

Parasites infestation consequences on the host are of particular importance in the medical report. This phenomenon is showing through the following actions: mechanical, spoliation, toxic and inoculation.

Ways in which parasites are leaving the hosts, different forms of resistance spread, or the existence of a large number of intermediate hosts, all of which increase the possibility of infestation. Currently in Romania, one of the most important branches of the economy is agriculture, cattle breeding, respectively.

Sheep breeding is a main branch of cattle breeding, sheep being found in all regions of the country. Given the diversity of products, biological and economic value of sheep, all contributed to the appreciation over time.

This paper intends to establish a scheme of antiparasitic treatment in sheep based on necropsic analysis and coproparazitological examinations carried out. Have only used drugs on the market products from Romania, easy to get hold cost relatively little.

### **MATERIALS AND METHODS**

This research has been conducted in the north-western part of Romania, Bihor County, Abram, the village of Suiug.

Following necropsis and coproparazitological examinations to determine both the extent of the infestation and the type most common parasites found in that area. Coproparazitological examinations have been

conducted between the 10th and 15th day of each month for the duration of the research.

This research was conducted during the period of 01.03.2016-28.03.2017 and was carried out on a flock of 1000 sheep, of which 600 adult sheep heads respectively 400 lambs, Țurcană and Carabaș from the race. The 1000 sheep we have divided into two groups. The experimental lot consisting of 560 adult sheep heads and 380 lamb heads; the control group comprised of 40 adult sheep and 20 heads of lambs.

The control group was held on the same pasture with the other batch of sheep but to avoid access experimental batch at the controls, I used a pen. During study I conducted of 480 copro-parasitological exams by Willis method, 10 necropsis exams and 5 exams by gastrointestinal sedimentation method.

In each series of tests has been harvested from the faeces samples from 30 randomly chosen ends. Sacrificed an animal in order to perform the necropsic examination. Based on the analysis carried out it is an established protocol for disinfection.

## **RESULTS AND DISCUSSIONS**

At the time of 14.03.2016 harvesting was carried out in sterile containers faeces, and then analyses were performed by Willis method.

The results showed that the animals are infested with *Fasciola hepatica* and *Dicrocoelium lanceolatum*. As a result of these analyses have established the administration of an antiparasitic product based on albendazole has a wide, active against both adult and Trematodes, pulmonary and gastrointestinal nematodes (eggs, larvae, adults) and some cestodes.

Thus in March 15 was given to Helmizol (2, 5 g/100 ml product) with a dose of 1 ml per 10 kg of body weight, the dose being the recommended usage leaflet.

Considering that albendazole adult cestodes harms at 20 days after administration of the first cycle of treatment in accordance with Parasitic Trematodes I repeated deworming, to avoid formation of resistance to the active substance of parasite, I have given a product as an active substance oxiclozanide, acting and the eggs and larvae of the trematode.

This product covers the same spectrum as parasitic and albendazole. On 31.03.2016 the product was administered Douvistome.

The 02.06.2016 a sheep was sacrificed as a result of the presentation of the following clinical signs: lack of appetite, swelling around the eyes, diarrhea, increase in liver area and abdominal tenderness on palpation; necropsic examination and as a result it was found the presence of trematode

such *Moniezia expansa* and *Fasciola hepatica*. Following these results it was established the administration of a treatment-based albendazole.

The 06.06.2016 batch of sheep was administered Vermitan 10% with a dose of 1 ml per 10 kg of body weight, according to the prospectus for use provided by the manufacturer of this drug.

The 05.09.2016 following the harvesting from sheep faeces from the experimental lot, we conducted analysis by method of Willis, which I discovered the infestation in sheep with *Nematodirus helminthes* and *Trichostrongylus*.

Thus was given an antiparasitic based Albendazole. I managed on the 07.09.2016 , 2.5% Ascacid, a dose of 15 ml/50 kg body weight, which is an oral suspension.

To prevent the infestation of sheep with ectoparasites such as surroundings, vituli linognatus; trematode fasciola hepatica and fasciola gigantic; the various types of scabies and gastrointestinal nematodes decided product administration Evomec addition date of 25.01.2017 which has a wide spectrum of action. Product administered subcutaneously with a dose of 1 ml per 50 kg body weight.

The active substance of this medicine is Ivermectin and Clorsulon. This is a substance of class antiparasitic macrocyclic lactones, ectoparasites and endoparasites, sheep, cattle, swine and goats.

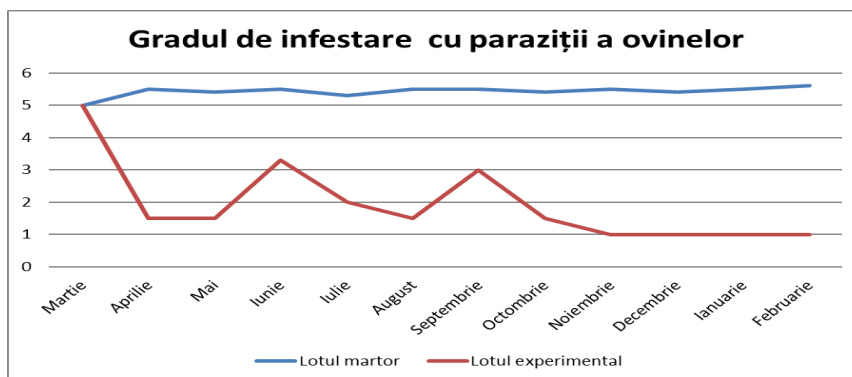


Fig. 1. Graphical representation of the new breed of sheep with infestation

In Figure 1. is apparent oscillation level of infestation of sheep during the period investigated. Ovine in March from both groups present the same degree of infestation, but after treatment administered experimental batch, their degree of infestation.

In April and May on the degree of infestation remains consistently low. In contrast to June presents a fairly high oscillation compared to previous months, then, following the administration of appropriate treatment be noted a drop in the infestation degree of infestation. Last September,

according to the biological cycle of Maroon 5 who were on pasture, resulted in a fairly massive contamination of animals, and on the basis of these analyses we decided the administration for combating parasites you encounter, and as a result product administration, the extent of the infestation has declined and remained low with no changes occur by the end of the research.

On the degree of infestation of the lot we can observe the witness that, although at first the degree of infestation of the two groups was the same, during the research this batch showed downward trend but only a very slight oscillation. Control group presents a slight deviation from the beginning up to the end of the research.

On 26.06.2016, a sheep aged 1 year, this behavior differently from the rest of the sheep. This following symptoms: impairment in walking, mastication, hiperreflexivity, squeling from teeth, visual disturbances, walking in the grounds (in the left circle, because the coenurus was located on the left side of the cerebral hemisphere) based on the simtoms the diagnosis was coenurus or the popular name „madeness”. The animal died, where upon the necropsy was carried out of the body for confirmation of diagnosis.

Table 1.

The degree of infestation of the sheep during the research			
Month	High	Medium	Low
March	x		
April			x
May			x
June		x	
July			x
August			x
September		x	
October			x
November			x
December			x
January			x
February			x

The table above shows the extent of the infestation of adult sheep throughout the research. The first month is March where she has noticed a massive degree of infestation. After treatment carried out in April and May,

the analyses showed a low degree of infestation in comparison with March. By performing monthly tests in June could see a rise in parasitoses to a medium level. In July and August, the analyses showed a low degree of infestation, or even lack there of. September means, legally, a period favorable for the spread of parasites in sheep and, according to, appraisals can be seen an infestation medium level. Instead, in the months of October, November, December, January and February, monthly analyses been reexamined noted the absence of infestation by pests.

## CONCLUSIONS

During the research study of ovine subject there have been the following: *Fasciola hepatica*, parasitic Cestoda (Cestoidea), *Cenuroza*, *Moniozia*, *Dicrocelioza*, *Eimeriosis expansa*. The research of the 40 adult sheep have left 27 due to massive infestation with *Fasciola hepatica* and *Moniezia expansa* with.

In the experimental lot, of 560 sheep research, adult, remained in 559 number of heads, one showing unusual clinical signs, which indicated that it was suffering from cenurozes, result is confirmed after examining the necropsis. Taking into account the life cycle of this parasite it is confirmed that the sheep was contaminated before the start of the research. In conclusion, as a result of the analyses carried out during monthly sheep research I could establish a treatment schedule and in the last analysis, they confirmed that animals no longer found to infestations of pests.

Scheme of receivers in sheep during the investigation:

- the 15.03.2016 I managed to Helmizol to combat parasitic infestation with *Fasciola hepatica* and *Dicrocoelium lanceolatum*.
- 31.03.2016 date I managed the product Douvistome
- on the 06.06.2016 I Vermitan 10% product administered to combat *Moniezia expansa* and liver but *Faciola*
- the 05.09.2016 have carried out taking sheep with Neocidol, this product the trial was performed prophylactically in date 05.09.2016 I Ascacid 2.5% product administered to combat infestation with helminții and *Nematodirus Trichotrongylus*.
- the product 04.01.2017 product Coglavax I-run administered prophylactically
- 05.01.2017 date I administered Evomec plus product.

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