

## THE COMPARATIVE EFFECT OF TWO ANTIPARASITIC DRUGS IN SHEEP

### EFFECTUL COMPARATIV A DOUĂ PREPARATE ANTIPARAZITARE LA OI

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*This study was performed in two consecutive years, 2006 and 2007, on 30 Țurcana breed, 2-5 years aged sheep from Timiș and Caraș-Severin districts, with clinical signs of ovine oestrosis. The animals received two antiparasitic drugs, Ivomec and Rafoxanid and after 12 days after treatment they were slaughtered and their heads were been examined in the way of Oestrus ovis larvae discovering. The effect of treatment with Ivomec was superior to those of Rafoxanid, demonstrated by number of larvae found in nasal ways and sinuses. It was also observed the higher incidence of ovine oestrosis in 2006 in comparison with 2007, attributed to meteorological conditions.*

**Key words:** ovine oestrosis, Oestrus ovis, larvae, antiparasitic drugs.

#### Introduction

In our country, since many years was recognized that exists endemic regions with ovine oestrosis, where constantly is observed the presence of this parasitic disease, mainly in field and hill areas, in west, south-west and east of Romania. In the last years, the currency of this disease was influenced by prophylactic or necessity treatments with Rafoxanid against fasciolosis, but is known that this drug has a good effect too against oestrosis. The limitation of Oestrus ovis populations is made by natural factors effect, like drought or heat, who destroy first instar larvae and pupae, although the adults are thermophiles and xerophiles. Usually, farmers from our country does spring treatments, because they are afraid by the large number of clinical signs, although more important are autumn prophylactic treatments, because the pathogen effect of larvae is stopped at time.

#### Materials and Methods

This study was performed on two consecutive years, when were tested the comparative effect of two antiparasitic drugs, Ivomec and Rafoxanid. In this study were used 15 sheep in 2006 and 15 sheep in 2007, grouped in three batches, with 5 animals each, in every year of study. Sheep were from Țurcana breed, 2-5 years

aged, natural infested with *O. ovis*, with clinical signs attributed to oestrosis, from private flocks from Timiș and Caraș-Severin districts. In September 2006 and September 2007 were administrated to experimental batches of sheep Ivomec 0.2 mg/ kg heavy weight subcutaneous and Rafoxanid 7.5 mg/kg heavy weight per os. After 12 days from treatment the sheep were slaughtered and were examined heads in the way of *Oestrus ovis* larvae discovering, from all stages of development.

### Results and Discussions

The obtained data are shown in tables 1 and 2. Was observed that in 2006, at 12 days after treatment, in the case of Ivomec were found only 19 dead *O. ovis* larvae, from all three stages of development, while were not observed alive larvae. This fact demonstrates a very good effect of this drug, with 100% efficiency, taking into account that in 2006, like can be observed in control batch, in this region the oestrosis had a maximal incidence, with 154 larvae from all stages, only from a number of 5 sheep.

**Table 1**

The results of sheep treatment in September 2006

Treatment	Number of animals	L I alive	L II alive	L III alive	Total	L I dead	L II dead	L III dead	Total
Ivomec 200mg/kg	5	0	0	0	0	13	5	1	19
Rafoxanid 7.5mg/kg	5	4	0	0	4	0	0	0	0
Control	5	87	51	16	154	0	0	0	0

In the case of Rafoxanid, the treatment efficiency was lower, because were been discovered only 4 of first instar larvae (L I) but alive, no dead, like was expected.

**Table 2**

The results of sheep treatment in September 2007

Treatment	Number of animals	L I alive	L II alive	L III alive	Total	L I dead	L II dead	L III dead	Total
Ivomec 200mg/kg	5	0	0	0	0	6	2	1	9
Rafoxanid 7.5mg/kg	5	2	0	0	2	0	0	0	0
Control	5	38	17	8	63	0	0	0	0

In 2007, the treatment with Ivomec showed to be with the same efficiency, because to the sheep necropsy were been found 9 dead larvae and no alive larva at 12 days after treatment. In the case of treatment with Rafoxanid were been

discovered 2 alive larvae, this fact showing a decreased efficiency in treatment with this antiparasitic drug. The year 2007, seems to be with a lower incidence of oestrosis in comparison with 2006, because were been identified 63 alive larvae, from all three stages of development, in control batch. This fact may be attributed to drought, in 2007 was a great deficit of precipitations, especially in spring, than follows a heat summer, with very high temperatures and for a long time period. These conditions were not favourable to *Oestrus ovis* development, it is known that this parasite evolves with a high incidence only in rainy years and with moderate temperatures.

### Conclusions

1. The Ivomec treatment effect registered 100% efficacy, at necropsy were not identified *Oestrus ovis* alive larvae in nasal ways and sinuses.

2. The Rafoxanid is efficient against oestrosis but not with so high percent, fact proved by the presence of a reduced number of alive larvae in nasal ways and sinuses of treated sheep.

3. This study is in concordance with speciality researches, who demonstrate the limited effect of Rafoxanid in comparison with many antiparasitic drugs, in oestrosis treatment.

4. Although it was not followed this factor, the present study emphasized with the results obtained in control batch, a superior incidence of ovine oestrosis in Timiş and Caraş-Severin districts in 2006 in comparison with 2007, attributed to unfavourable meteorological conditions in the second year, with drought and so increased temperatures during summer.

### Bibliography

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