

EFFICIENCY OF DIFFERENT MODIFICATIONS OF MCMASTER METHOD FOR ENUMERATION OF NEMATODE EGGS

Asta Pereckienė¹, Antanas Vyšniauskas¹, Saulius Petkevičius^{1,2}

¹*Veterinary Institute of Lithuanian Veterinary Academy, Instituto st. 2, LT-56115 Kaišiadorys, Lithuania, tel. +370 346 6 60 91; e-mail: petkevicius@lva.lt*

²*Department of Infectious Diseases, Lithuanian Veterinary Academy, Tilžės st. 18. LT-47181, Kaunas, Lithuania*

Summary. Efficiency of different modifications of McMaster method for enumeration of nematode eggs in different agriculture animals was studied. For experiment 13 pig, 2 horse and 2 sheep farms were randomly selected, and 815 of pig faecal samples, 264 of horse and 264 of sheep faecal samples were examined. The positive samples were identified by S.A. Henriksen & K. Aagaard (1976) modification of McMaster method. Furthermore, 60 positive faecal samples of each species of animal (pig, horse and sheep) were selected. Experimental horse faeces were examined by S. A. Henriksen & K. Aagaard (1976) and G. M. Urquhart (1996) modifications, whereas pig and sheep faeces were examined by S. A. Henriksen & K. Aagaard (1976) and T. Kassai (1999) modifications, respectively. All samples were evaluated in two replicates: using traditional McMaster 0.3 ml chamber - I and newly designed 1.5 ml chamber - II (Vyšniauskas et al., 2005). The new egg count chamber (II) has a bead, which prevent the faeces suspension from seeping out and protects the optics of microscope from adverse effect. In pig farms, 205 and 273 pigs (I and II) were positive to whipworm, roundworm and nodular worm infections ($P<0.05$). In horse farms, 173 and 221 with strongyles infected horses were identified ($P<0.05$), and in sheep farms the number of positive to strongyle infection animals was 215 and 254 (I and II chambers, $P<0.05$), respectively.

The new modification of chamber demonstrated statistically higher sensitivity for enumeration of nematode eggs and for evaluation of farms with infected animals compared to S. A. Henriksen & K. Aagaard (1976), T. Kassai (1999) and G. M. Urquhart (1996) modifications.

Key words: EPG, McMaster, comparison.