

COMPARITIVE ANALYSIS OF MODIFICATIONS OF THE MCMASTER METHOD FOR THE ENUMERATION OF *TRICHOSTRONGYLUS* SPP. EGGS IN SHEEP FAECES

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Summary. The comparative efficacies of seven published McMaster method modifications for faecal egg counting were evaluated on sheep faecal samples containing *Trichostrongylus* spp. eggs. In the present study compared methods were reported by: I - Henriksen and Aagaard, 1976; II - Kassai, 1999; III and IV - Urquhart et al., 1996 (centrifugation and non-centrifugation methods); V and VI - Grønvold, 1991 (salt solution, and salt and glucose solution); VII - Thienpont, 1986. Each method was evaluated after the examination of 30 samples of faeces. Comparisons were made as to the number of samples found to be positive by each of the methods, the total egg counts per gram (EPG) of faeces, the variations in EPG obtained in the samples examined, and the ease of use of each of the methods. The positive samples were identified by counting *Trichostrongylus* spp. eggs in one, two and three sections of newly designed McMaster chamber. Our study showed that the most complex was Method I, and the simplest and quickest analysis was performed by Method VII. Examination of all three chambers resulted in five methods (I–IV, and VI) having 100% sensitivity, while methods V and VII had 97.8% and 95.6% sensitivity, respectively. Mean egg counts in two chambers varied from 1082 EPG (Method II) to 422 EPG (Method IV). Based on the mean egg counts for two chambers, an efficiency coefficient was calculated and equated to 1 for the highest egg count (Method II) and lowest (0.39) for Method IV. Our results have shown that from seven evaluated methods Method I (Henriksen and Aagaard) was most stable and sensitive. Examining two or three sections of the McMaster chamber resulted in increased sensitivity for all methods. Efficiency coefficients make it possible not only to recalculate and unify results of faeces examination obtained by any method but also to interpret coproscopical examinations by other authors.

Key words: sheep, MacMaster modifications, *Trichostrongylus* spp.