



## Co-infections with gastrointestinal parasites, in a free-range swine farm from the Transylvania area

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### INTRODUCTION

Parasitic diseases cause significant economic losses in swine by diminishing productions and causing diseases and mortality. In the last decade, an increase in the number of free-range swine farms was noticed in Romania, further complicating the epidemiology of parasitic diseases. The current study aimed to identify the parasitic profile of swine raised on a free-range farm from the Transylvania area.



**Fig. 1.** Picture showing a free-range farm

### MATERIALS AND METHODS

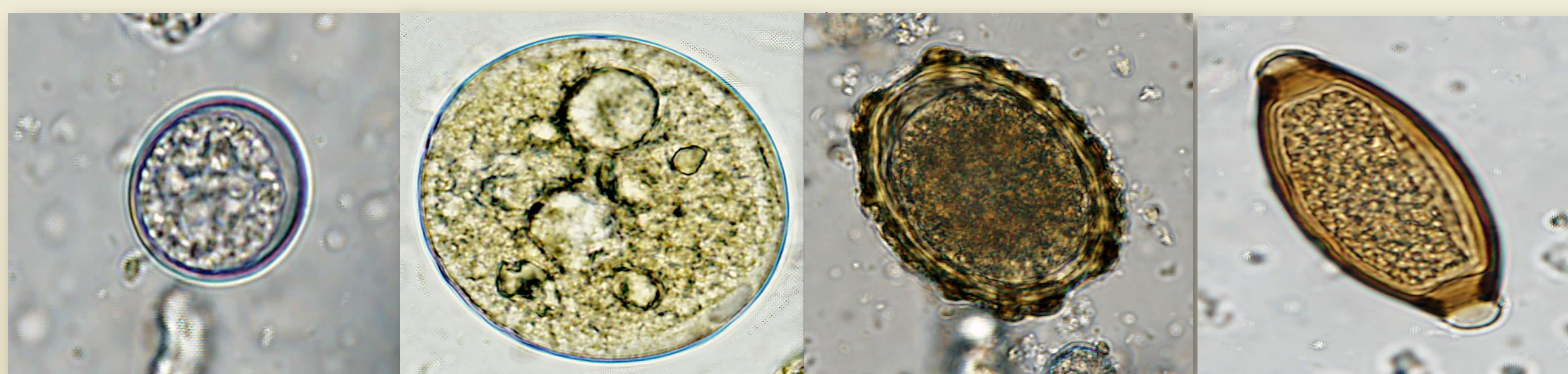
Sixty fecal samples collected from piglets, fattening pigs, and sows were investigated by flotation (Willis and McMaster), active sedimentation, Ziehl-Neelsen stain modified by Henricksen, and modified Blagg methods. The number of oocysts (OPG), cysts (CPG) and eggs (EPG) were counted per gram of fecal matter. Prevalence (P) and the average intensity (I) of infection varied according to age and category of investigated swine.



**Fig. 2** All the materials necessary for the copro-parasitological methods

### RESULTS AND DISCUSSIONS

The copro-parasitological examination revealed parasitic infections with *Balantidium coli*, *Eimeria* spp./*Isospora suis*, *Ascaris suum*, and *Trichocephalus suis*. During spring season, the broadest spectrum of parasites was identified in fattening pigs: *B. coli* (P = 40%, I = 300 CPG), *Eimeria* spp./*I. suis* (P = 90%, I = 700 OPG), *A. suum* (P = 70%, I = 200 EPG) and *T. suis* (P = 60%, I = 800 EPG). Similar rates of infection were observed in piglets: *B. coli* (P = 40%, I = 400 CPG) and *Eimeria* spp./*I. suis* (P = 90%, I = 1.000 OPG), and sows: *B. coli* (P = 30%, I = 200 CPG) and *Eimeria* spp. / *I. suis* (P = 90%, I = 9.100 OPG). In the autumn season, the highest number of parasite species was identified in fattening pigs: *B. coli* (P= 40%, I=50 CPG), *Eimeria* spp./*I. suis* (P=100%, I=1700 OPG), *A. suum* (P=100%, I= 5940 EPG), and *T. suis* (P=20%, I= 225 EPG), followed by sows: *B. coli* (P= 90%, I= 400), *Eimeria* spp./*I. suis* (P= 30%, I= 467 OPG), and *A. suum* (P=60%, I=533 EPG) and piglets: *B. coli* (P=20%, I=225 CPG) and *Eimeria* spp./*I. suis* (P=100%, I= 31.480 OPG)



**Fig. 3.** Copro-parasitological examination results: *Eimeria*/ *I. suis* oocyst, *B.coli* cyst, *A. suum* egg, *T. suis* egg.

### CONCLUSIONS

Pigs raised in this free-range farm, had associated infections with *A. suum*, *T. suis*, *B. coli* and *Eimeria* spp. / *I. suis*. Prevalence and average intensity had high values but clinically, the pigs were asymptomatic.

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