

# SWINE PARASITIC PROFILE FROM A FREE-RANGE FARM IN THE TRANSYLVANIA AREA

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### **Introduction**

In Romania, swine breeding is an important tradition, the vast majority of pigs being raised in low input systems. Recently an increase in the number of free-range farms has been registered (Ichim, 2012).

Parasitic diseases cause significant economic losses to pigs by reducing production, morbidity and mortality in livestock (Kochanowski et al., 2017)



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

### <u>Aims</u>

This study aimed to identify the swine parasitic profile, raised on a farm from Transylvania, characterised by a free-range breeding system.

It will support future studies regarding the antiparasitic effects of some plants from the native flora.

# **Materials and methods**

A number of 30 faecal samples were collected from pigs of different ages. The coproparasitological examination was performed using the following methods: Willis, McMaster, Blagg, Henriksen, and active sedimentation methods as well as faecal cultures. The obtained data were centralized and processed in tables in the form of indicators of prevalence (P = %) and average intensity (I = OPG, CPG, EPG).





Fig. 2 All the materials necessary for the coproparazitological methods

# **Results**

The coproparasitological examination performed, revealed parasitic infections with *Ascaris suum, Trichocephalus suis, Balantidium coli* and *Eimeria spp. / Isospora suis*. Prevalence and the average intensity of infections varied according to age and category of pigs. In suckling piglets, only *B. coli* (P = 40%, I = 400 CPG) and *Eimeria spp. /I. suis* (P = 90%, I = 1.000 OPG) were identified. In weaned piglets, *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) were diagnosed. In sows, *B. coli* (P = 30%, I = 200 CPG) and *Eimeria spp. / I. suis* (P = 90%, I = 9.100 OPG) were identified.

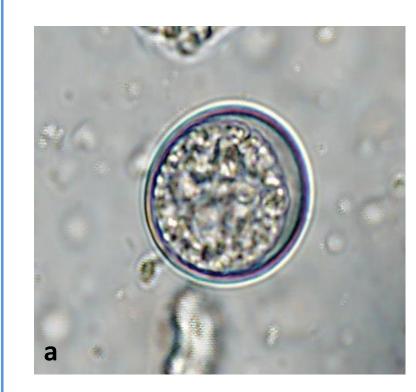








Fig. 3 a. b. c. d Coproparasitological examination results: a.-Eimeria/I. suis, b- B.coli, c-A. suum, d-T. suis.

#### **Discutions**

Pigs	Parasite	Prevalence	Country	Autor
category		%		
	Coccidia	31.4	Poland	Kochanowski et al., 2017
Suckling	*	88	South Africa	Nwafor et al., 2019
piglets	B. coli*	28.6	Bangladesh	Dey et al., 2014
		2.6	Greek	Symeonidou et al., 2020
	Coccidia	7.1	Poland	Kochanowski et al., 2017
	*	75	South Africa	Nwafor et al., 2019
	B. coli*	52.4	Bangladesh	Dey et al., 2014
Weaned		13.5	Greek	Symeonidou et al., 2020
piglets	A.	63.9	South Africa	Nwafor et al., 2019
	suum*	28	Denmark	Pietrosemoli et al., 2020
	T. suis*	2.9	Poland	Kochanowski et al., 2017
		63.9	South Africa	Nwafor et al., 2019
	Coccidia	17.1	Poland	Kochanowski et al., 2017
	*	43.8	South Africa	Nwafor et al., 2019
Sows	B. coli*	38.5	Bangladesh	Dey et al., 2014
		81.3	Greek	Symeonidou et al., 2020

**Table 1.** Prevalence from different countries using flotation method \*

#### **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

#### References

Dey, T. R., Dey, A. R., Begum, N., Akther, S., & Barmon, B. C. (2014). Prevalence of endo parasites of pig at Mymensingh, Bangladesh. Journal of Agriculture and Veterinary Science, 7(4), 31-38.

Ichim, O. (2012). An overview of organic pig farming in Romania. Porcine Research, 2(2),

Kochanowski, M., Karamon, J., Dąbrowska, J., Dors, A., Czyżewska-Dors, E., & Cencek, T. (2017). Occurrence of intestinal parasites in pigs in Poland-the influence of factors related to the production system. Journal of veterinary research, 61(4), 459-466.

Nwafor, I. C., Roberts, H., & Fourie, P. (2019). Prevalence of gastrointestinal helminths and parasites in smallholder pigs reared in the central Free State Province. Onderstepoort Journal of Veterinary Research, 86(1), 1-8

Pietrosemoli, S., & Tang, C. (2020). Animal Welfare and Production Challenges Associated with Pasture Pig Systems: A Review. Agriculture, 10(6), 223.

Symeonidou, I., Tassis, P., Gelasakis, A. I., Tzika, E. D., & Papadopoulos, E. (2020). Prevalence and Risk Factors of Intestinal Parasite Infections in Greek Swine Farrow-To-Finish Farms. Pathogens, 9(7), 556.