

Gastro-intestinal parasites of pigs in Sardinia: a copromicroscopical investigation

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A copromicroscopical investigation was carried out in Sardinia to update epidemiological data on diffusion of gastro-intestinal parasites in swine. Five hundred and twenty-two (521) pigs were examined coming from 98 breedings of Sardinia, for a total consistence of 15,591 animals. The above said animals were bred both with intensive and extensive methods and were sampled according to their zootechnic categories (Sows, Boars, Store pig and piglets). Sows were present in 96 breedings while in 75, 66 and 55 respectively for boars, Store pig and piglets. Faecal samples were undertaken and copromicroscopical exams were performed with qualitative method using sedimentation and flotation in a supersaturated NaCl solution (P.S. 1200). Samples which result positive for Gastro Intestinal Nematodes (GIN) and Eimeriidae were processed for coprocultures to identify genus and/or species of the parasites (Euzéby J, 1987, Protozoologie Médicale Comparée, Vol.II, Fondation Mérieux, Lyon; Euzéby J, 1982, Diagnostic Experimental des Helminthoses Animales, Vol.I, Informations Techniques des Services Vétérinaires, Paris). 68.4% (n. 67) of the breedings were positive for almost one parasite specie. Detailed results for recovered species for pig breedings are shown in Table 1. Prevalences of infection for pigs bred with intensive and extensive methods were shown in Table 2.

Table 1.

Category	Eimeriidae *	<i>Ascaris suum</i>	<i>Balantidium coli</i>	GIN**	<i>Trichuris suis</i>
Sows	14.6%	5.2%	31.3%	30.2%	7.3%
Boars	5.3%	2.7%	14.6%	14.6%	1.3%
Store pig	9.1%	9.1%	18.2%	15.2%	3%
Piglets	3.6%	1.8%	9%	1.8%	1.8%

* Coprocultures and morphometrical exams shown the presence of *Isospora suis* in piglets, while in older animals were recovered 4 species of *Eimeria*: *E. spinosa* (46.4%); *E. suis* (36.2%); *E. deblickei* (11.6%); *E. polita* (5.8%).

**The result is comprehensive also of Spiruridae Nematodes and of the genus *Hyostromylius* and *Oesophagostomum*, identified with coprocultures and morphometrical exams on recovered eggs.

Table 2.

Intensive Breeding	Eimeriidae	<i>B. coli</i>	GIN	<i>Ascaris suum</i>	<i>Trichuris suis</i>
Sows (128)	1.6% (2)*	11.7% (15)*	7.8% (10)*	0.8% (1)	1.6% (2)
Boars (50)	10% (5)	12% (6)	16% (8)	2% (1)	2% (1)
Store pig (58)	/*	15.5% (9)	1.3% (6)	1.7% (1)	/
Piglets (34)	5.9% (2)	11.8% (4)	2.9% (1)	2.9% (1)	/
Extensive Breeding					
Sows (131)	14.5% (19)*	36.6% (48)*	24.4% (32)*	3.8% (5)	4.6% (6)
Boars (45)	11.1% (5)	13.3% (6)	17.7% (8)	2.2% (1)	2.2% (1)
Store pig (46)	17.4% (8)*	15.2% (7)	10.9% (5)	13% (6)	4.3% (2)
Piglets (29)	/	6.9% (2)	/	/	3.4% (1)

* P < 0.01 (Test χ^2 and Test χ^2 Yates corrected).

Obtained results shown the presence of polispecific infections in the Sardinian swine breedings, that affect a considerable number of farms. Statistically differences were found between intensive and extensive breedings, particularly for Eimeriidae, *B. coli* and GIN prevalences that result higher in traditional breedings for sows and for Eimeriidae, recovered only in Store pig of extensive breedings.

This situation lead us to suggest the employment of copromicroscopic exam to monitorate parasites diffusion in swine breedings in order to set up correct prophylactic and therapeutically intervents.

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