

DISTRIBUTION OF SWINE NEMATODES IN EUROPEAN COUNTRIES

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Introduction. Among the most widespread pathologies of parasitic etiology in pigs, intestinal nematodes occupy a prominent place in terms of the degree of damage and causing economic losses, namely: ascariasis, trichuriasis and esophagostomosis. Diseases of pigs with intestinal nematodes are registered in different climate-geographical zones.

Young pigs lose daily growth by 20–60%, feed unit costs increase by 25–100%, for 2–2.5 months the period of fattening is extended [1].

The aim of the work was to study the spread of nematode infestation in different European countries according to the literature.

Materials and methods. The research material was data from literary sources of foreign authors.

Results and discussion. Despite the high culture of pig farming, pig helminthiasis is quite common in economically developed European countries. In particular, out of 144 pig fattening farms in the state of North Rhine-Westphalia (Germany), esophagostomosis was registered in 79% of farms, ascariasis in 7%, trichuriasis in 8%. Coproscopic studies of sows on farms in southern Germany revealed *Ascaris suum* eggs in 10–40%, *Trichuris suis* – in 6.4–60%, *Oesophagostomum dentatum* – in 100% [2].

In the Rhine-Palatinate region, 2,049 samples of material from 76 sows and 80 piglets were examined over two years, the extent of which was 18.1% with ascaris, 24.6% with trichuris, and 55.8% with esophagostomes. According to the report, 50% of sows on farms in the Westphalia-Lippe region were affected by helminths, of which ascaris, trichuris, and esophagostomes were the most common [3].

Great importance is attached to the problem of infestation of pigs with helminthiasis, of which ascariasis, trichuriasis and esophagostomosis are most often registered in Great Britain.

In Italy, the greatest economic damage to pig farming is caused by helminthiasis, among which ascariasis, esophagostomosis, and trichuriasis are of decisive importance. According to the experts of the Milan Institute of General Veterinary Pathology, 24% of the herd were affected by three types of helminths at the same time, of which 7% were affected by ascariasis, 14% by strongyloidiasis [4].

Coproscopic examinations of pigs carried out in Denmark revealed *A. suum* infestation in 8.9% of sows,

and *Oe. dentatum* in 12.8%. The results of the conducted research established that sows were mainly affected by two types of nematodes (ascaris and esophagostoma in association), and trichuriasis occurred in sporadic cases [5].

There are numerous reports of detection of ascariasis, esophagostomosis and trichuriasis in pigs in the form of mono- and mixed infestations in Sweden, Estonia, Lithuania, Greece, Serbia, the Czech Republic, and Poland.

The researchers noted the dependence of the extent of damage by ascaris and esophagostomes on the age of the pigs. According to the obtained data, the greatest extent of ascariasis infestation was registered in the selection and rearing groups, trichuria – in 4-month-old piglets, while the highest extent of esophagostomosis infestation was found in adult pigs.

Conclusions. According to the results of epizootological monitoring, it was established that in the farms of economically developed countries of Europe with different forms of ownership, the most widespread infestations of pigs are ascariasis, trichuriasis, and esophagostomosis.

References

1. Pelenho, R. A. (2013). Monitoring of gastrointestinal parasitosis of pigs in the farms of the western region of Ukraine. *Naukovyy visnyk LNUVMBT imeni S.Z. Hzhys'koho*, 15(3(57)), 267-274.
2. Peng, W., & Criscione, Ch. D. (2012). Ascariasis in people and pigs: New inferences from DNA analysis of worm populations. *Infection, Genetics and Evolution*, 12, 227-235.
3. Puttacharya, S., Trailovica, S. M., Robertson, A. P. & Thompson D. P. (2013). Derquantel and abamectin: Effects and interactions on isolated tissues of *Ascaris suum*. *Molecular & Biochemical Parasitology*, 188, 79-86.
4. Abongwa, M., Buxton, S. K., Courtot, E., & Charvet, C. L. (2016). Pharmacological profile of *Ascaris suum* ACR-16, a new homomeric nicotinic acetylcholine receptor widely distributed in *Ascaris* tissues. *British Journal of Pharmacology*, 173, 2463–2477.
5. Vlaminka, J., Nejsumb, P. Vangroenweghec, F., & Thamsborg S. M. (2012). Evaluation of a serodiagnostic test using *Ascaris suum* haemoglobin for the detection of roundworm infections in pig populations. *Veterinary Parasitology*, 189, 267–273.