National Veterinary Research Institute
in Pulawy
Poland

National Trichinellosis Reference Laboratory

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Poland

- Centrally located, Poland is the 9th largest country in Europe with the total area of 312.7 thousand km².
- The total number of inhabitants 38.6 million people;
- 38% live in rural areas.
Poland general information

• Most of Poland’s territory is lowland sweeping to the Baltic Sea in the north.
• To the east, it borders on the Russian Federation, Lithuania, Belarus and Ukraine,
• Slovakia and Czech Republic surround it in the south,
• Germany in the west.
Forests

- The main source of human trichinellosis in Poland are wild – boar.
Department of Hygiene of Food of Animal Origin

• RESEARCH ACTIVITY
  • microbiology and chemistry of food of animal origin
  • improvement and implementation of laboratory methods for the examination of food of animal origin
  • sanitary evaluation of technological processes in meat and milk processing plants
  • determination of the species of raw materials and products of animal origin

• REFERENCE ACTIVITY
  • detection of *Campylobacter* and *Trichinella* organisms, antibacterial drug residues, microbiological contamination of food, and marine toxins, viruses and bacteria in lamellibranchiate molluscs.
  • determination of hormone, growth promoter and thyreostatic residues
Trichinellosis Reference Laboratory
(magnetic stirred digestion method accredited according to ISO 17 025)

Main activity:
- Supervising over 500 vet. laboratories for routine diagnostic of trichinella
- Organising proficiency testing
- Training for Veterinary Inspection staff in magnetic stirred digestion method
- Collecting isolates of trichinella
- Currently introducing multiplex PCR method for identification of Trichinella spp.

Staff of the laboratory:
- 1. technician: Barbara Ścibior
- 1. veterinarian: Mirosław Różycki

**Epidemiology of Trichinella spiralis in wild boars and pigs in Poland.**
*Epidemiologia i występowanie Trichinella spiralis w populacji świń i dzików na terenie Polski.*
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Poland has long established practice in examination of pigs against Trichinella spiralis, reefer back to the end of XIX century. Presently trichinoscopic and digestive examinations are conducted on all slaughtered pigs, horses and hunted wild-boars. Examinations are compulsory even if the slaughter takes place at home and the pork is for owner’s use only. In the period between the war’s average percentage of infected animals occurred in Bialystok region (plenty of forests and close to the former Russian border where trichinosis occurred more often than in Poland). Dates from the period 1947-1957 includes 67 966 534 examined pigs and the percentage of infected with trichinellosis animals was 0,025%. These results ... inspection has examined in the period 1985-2000 over 190000000 animals and the percentage of infected animals was 0,0023%

Current epidemiological situation.
The data of investigations show that both synanthropic and natural focuses of trichinellosis occur in Poland. Trichinellosis was diagnosed in domestic pigs (Sus domestica) and wild boars (Sus scrofa). In 2001 were diagnosed 54 042 sample of wild boar meat (by the artificial digestion) and 16 118 068 pig meat samples (by the magnetic stirred digestion). In the examined 70 162 070 sample of meat 57 077 090 were diagnosed Trichinella spiralis. The highest prevalence of Trichinella spiralis in pigs was observed in Zachodniopomorskie voivodeship (0.00676). Trichinellosis of wild boars occurs in 9 of 16 voivodeships the mean infections rate was 0,15. The highest prevalence of Trichinella spiralis in wild boars was observed in Lubelskie voivodeship (0.5). Interesting information can be found after the comparison of map of Trichinella prevalence in pigs, wild boars and map of forests in Poland. After the preparation of map of trichinella prevalence in pig and wild boars it was observed that the regions with highest prevalence of trichinosis in wild boars did not refer to the high prevalence of pig trichinellosis. In comparison with map of forests in Poland the regions with highest prevalence of trichinellosis did not refer to the high prevalence of forests.

The aim of the next study will be find correlation between existing large pig farms and trichinella spiralis prevalence.
Trichinellosis

- All slaughtered pigs, coypu, horses and hunted wild boar are tested for trichinellosis. In 2006, 337 cases of trichinellosis were registered, 16 of them in pigs and 321 in wild boar.
- Pigs trichinelosis - 0.002516%,
- Wild boars trichinellosis - 0.375%

WILD ANIMALS
- Red foxes - 1.3%
- Wolfs - 7.3%
- Badgers - 2.9%
Human trichinellosis 2000 - 2007

- 2000 r. - 36 cases
- 2001 r. - 52
- 2002 r. - 42
- 2003 r. - 40
- 2004 r. - 163
- 2005 r. - 62
- 2006 r. - 133
- 2007 r. - 32 (31.05.2007)
  + 8 suspected (12.06.07) in Szczecin
National Veterinary Research Institute 2005 - 2007