

Occurrences of *Trichinella* spp. in domestic pigs and wild boars in Poland (2016-2019)

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Introduction

Trichinellosis is a zoonotic meat-borne disease caused by the nematodes of the genus *Trichinella*. Humans and animals may be infected by eating muscle tissue contaminated with live larvae of *Trichinella* spp. The most common source of human infection is the meat of domestic pig and wild boar.

Aim

The goal of the study was the estimation of occurrences and geographical distribution of *Trichinella* spp. infections of wild boars and domestic pigs in Poland in the years 2016-2019.

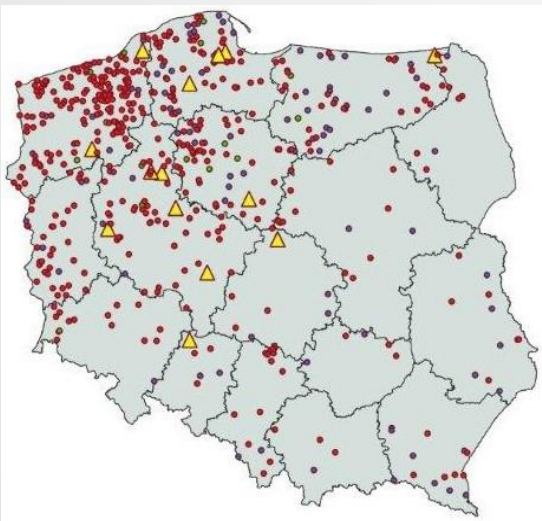
Materials and Methods

Preferential muscle tissues of domestic pigs and wild boars were investigated by the digestion method and subsequently detected *Trichinella* spp. larvae were identified at the species level by multiplex PCR. Detected and genetically identified infection cases were geographically mapped using QGIS software. A total of 89,341,610 domestic pigs and 1,080,412 wild boars were tested.

Results

We identified 81 *Trichinella spiralis*-positive cases of pigs. In wild boars, 930, 300, and 22 cases of *T. spiralis*, *Trichinella britovi*, and mixed *T. spiralis*/*T. britovi* infections were found. As shown in Figure, all *Trichinella*-infected domestic pigs and the majority of infected wild boars were detected in the north and west of the country.

Figure: geographical distribution of *Trichinella* species occurs in wild boars and domestic pigs in Poland in the years 2016-2019. Red points are *T. spiralis*, blue points are *T. britovi*, while green points are mixed *T. spiralis* and *T. britovi* cases in wild boars. The triangles are *T. spiralis* cases in domestic pigs.



Conclusion

In conclusion, Poland cannot apply for *Trichinella*-free country or regions however, farms located in the south-east part of Poland may apply for *Trichinella* free holdings certification.