

## PREVALENCE OF *YERSINIA ENTEROCOLITICA* AND *YERSINIA PSEUDOTUBERCULOSIS* IN SLAUGHTERED PIGS WITHIN 5 MONTHS PERIOD IN LITHUANIA

Aleksandr Novoslavskij<sup>1</sup>, Aistė Kabašinskienė<sup>1</sup>, Hannu Korkeala<sup>2</sup>, Mindaugas Malakauskas<sup>1</sup>

<sup>1</sup>*Department of Food Safety and Animal Hygiene, Veterinary Academy, Lithuanian University of Health Sciences  
Tilžės g. 18, LT-47181, Kaunas, Lithuania; e-mail: aleksandr.novoslavskij@lva.lt*

<sup>2</sup>*Department of Food and Environmental Hygiene, Faculty of Veterinary Medicine  
P.O. Box 66, FIN-00014 University of Helsinki, Helsinki, Finland*

**Summary.** The aim of the present work was to determine the prevalence of pathogenic *Yersinia enterocolitica* and *Yersinia pseudotuberculosis* bacteria in slaughtered pigs from Lithuanian pig farms using multiplex Polymerase Chain Reaction (PCR) method. A total of 105 microbiological samples (70 faecal samples and 35 carcass swab samples) were collected and examined from slaughtered pigs from seven different Lithuanian pig farms. *Yersinia* spp. bacteria were isolated using cold enrichment method (21 days at 4°C) in PMB broth with further planting on CIN agar. The results of our study showed that using multiplex PCR method pathogenic *Yersinia* spp. was found in slaughtered pig samples delivered from 6 of 7 (86%) different farms. Four tested pig herds were contaminated with both pathogens *Y. enterocolitica* and *Y. pseudotuberculosis*, while the remaining herds were contaminated only with *Y. enterocolitica*. *Yersinia* spp. were identified in 21 (30%) of faecal and in 7 (20%) of carcass swab samples respectively. *Yersinia enterocolitica* was more prevalent in faecal samples (19%) than in carcass swab samples (17%) and *Y. pseudotuberculosis* was found in 3% of carcass and 11% of faecal samples, respectively. All obtained isolates of *Y. enterocolitica* were identified as serotype O:3. No other pathogenic bacteria serotypes were found in our study.

To our knowledge, no report of *Yersinia* spp. isolation and identification from slaughtered pigs from Lithuanian pig farms in Lithuania was made before. The results obtained in the present study could serve for future investigations of the *Yersinia* spp. infection, mainly focusing on the possible contamination routes at the pork production and possibility of prevention at farm level.

**Keywords:** *Yersinia enterocolitica*, *Yersinia pseudotuberculosis*, PCR, prevalence, pigs.