

USING SEROLOGICAL MONITORING, INTERNET-BASED FEEDBACK AND ON-FARM AUDITING TO IMPROVE TOXOPLASMA GONDII CONTROL AT DUTCH PIG FARMS

**Derk Oorburg¹, Dorien Eppink¹, Janneke Heijltjes¹, Martijn Bouwknegt¹,
Bert Urlings¹, Joke van der Giessen², Inge Krijger³, Monique Mul³,
Manon Swanenburg⁴, Henk Wisselink⁴**

¹*Vion Food, Holanda*

²*National Institute for Public Health and the Environment, Holanda*

³*Wageningen Livestock Research, Holanda*

⁴*Wageningen Bioveterinary Research, Holanda*

Background and objectives

Toxoplasma gondii is a relevant foodborne pathogen due to its human disease burden. In the Netherlands, pork is estimated to contribute to 11% of the meatborne *T. gondii* infections. The European Food Safety Authority advised to perform serological testing of pigs and on farm audits on risk factors for *T. gondii* infection.

Materials and methods

The true within-herd seroprevalence of *T. gondii* was estimated for pig farms using longitudinal data from Dutch abattoirs. Farms were ranked based on the estimated within-herd seroprevalence. Selected 'high risk' farms were audited. An internet-application was developed to report results back to the farm and increase awareness of relevant risks.

Results

Between 1 and >700 blood samples were collected from >3,500 farms. The estimated within-herd seroprevalence (preliminary results) of the top-ranked farms ranged from 15% to 50%. Final analyses are currently ongoing. Relevant risk factors were found to be present on farms with higher seroprevalences.

Discussion and conclusions

Serological screening of pig herds for *T. gondii* lead to the identification of herds in which typical risk factors for *T. gondii* infections are present. Effort to improve biosecurity were undertaken to reduce the seroprevalence. On farm audits and self-assessment tools are helpful in increasing the awareness of biosecurity. Changing farm management to reduce the exposure of pigs to *T. gondii* may reduce the human disease burden.