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

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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.