

## PORK SAFETY

**Title:** *Toxoplasma gondii* Infection in Sows and Market-Weight Pigs in the United States and its Potential Impact on Consumer demand for Pork  
**NPB# 00-130**

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**Date Received:** 4/24/2002

### Abstract

The objectives of this research were to assess and compare the prevalence of *Toxoplasma gondii* in sows and market-weight pigs (finisher pigs) in the United States using serum collected from sows in 1990, 1995, and 2000 and from finisher pigs in 1995 and 2000. Serum for this study was obtained from a survey of swine herds conducted by the National Animal Health Monitoring System (NAHMS). Participating herds were from 17 of the major pork producing states: Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Carolina, Ohio, Oklahoma, Pennsylvania, South Dakota, Texas, and Wisconsin. Serum samples from 505 herds were analyzed for *T. gondii* antibodies by the modified agglutination test (MAT) using formalin fixed tachyzoites as antigen. Titers of 32 or greater were considered positive. A positive titer means that the pig was infected with *T. gondii* at some time during its life and that it has *T. gondii* cysts in the muscles and/or organs. Positive animals were in 16/17 states. Of swine tested, 536/13,835 (4 %) were positive. Sows in the study (487/8086, 6 %) were 7 times more likely to be infected than finishers (49/5720, 0.9%). The prevalence in sows decreased between 1990 and 2000. Sows in 1990 were 4 times and sows in 1995 were 3 times more likely to be infected than sows in 2000. The prevalence in finishers decreased from 3.2 % to 0.9% between 1995 and 2000 with finishers in 1995, 4 times more likely to be infected. Of 505 herds, 25 % had at least one positive animal: sow herds were 10 times more likely to harbor a positive animal than finisher herds although the percentage of positive sow herds decreased from 49% in 1990 to 30 % in 2000. The percentage of positive finisher herds decreased also with herds in 1995, 3 times more likely to be infected than herds in 2000.

*These research results were submitted in fulfillment of checkoff funded research projects. This report is published directly as submitted by the project's principal investigator. This report has not been peer reviewed*

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