

# The prevalence of *Toxoplasma gondii* in finishing swine in Alberta

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*Toxoplasma gondii* is one of the most important zoonotic parasites of swine, and a potential public health problem. Among food animals, pigs are considered the major meat source of *Toxoplasma* for humans. Serological surveys for *T. gondii* in pigs in the United States have found infection in 3-23% of market age pigs. The objective of this study was to estimate the prevalence of *Toxoplasma gondii* antibodies in finishing swine in Alberta and compare our findings with those from previous studies in Canada and the United States.

Ten blood samples were collected on 3 separate occasions from 90 farms throughout Alberta. A total of 30 blood samples were collected from each farm during a 4 month period in 2000. The finishing swine tested were within 45-60 days of shipment. In all, 2689 samples were subsequently suitable for testing for the antibodies to *T. gondii*. A commercial ELISA kit (SafePath Laboratories, Carlsbad, California, U.S.A.) was used to test the sera. An ELISA reader was used to interpret the results. Test samples were considered positive when absorbance reading was  $\geq 0.20$  optical density units. *Toxoplasma gondii* antibodies with optical density  $\geq 0.02$  were found in sera from 8 of the 2689 pigs tested. The 8 positive animals came from 6 farms across Alberta. Four of the 6 farms had one positive sample each. The other 2 farms had 2 finishers test positive on different sampling dates. The false positive rate for the ELISA serological test is 17-19%; therefore, 2 of the 8 positive samples from finishing swine may not be a result of exposure to *Toxoplasma*.

## **Implications:**

Serological results from the study indicate that finishing swine in Alberta are rarely exposed to *Toxoplasma gondii*. The low prevalence of *Toxoplasma* in finishing pigs in Alberta may help enhance market access of pork or pork products to countries where toxoplasmosis is a public health concern.