

PORK SAFETY

Title: Salmonella Abatement in the Pork Chain – **NPB #98-148**

Investigator: Thomas Blaha, DVM, Ph.D.

Institution: University of Minnesota, College of Veterinary Medicine,
Department of Clinical and Population Sciences
385 AnSci/VetMed Bldg., 1988 Fitch Avenue,
St. Paul, MN 55108
Tel: 612 625 8290, E-mail: blaha002@tc.umn.edu

Co-Investigator: Allen D. Leman Chair

Date Received: 8/20/1999

Abstract

The project focused on the *Salmonella* infection-contamination-infection cycle on swine farms. The results reveal that the salmonella occurrence on swine farms is much more dynamic (prevalence and serotype patterns changing over time) than previously thought. Up to 18 different serotypes can be found on a single farm. The “exchange” of *Salmonella spp.* between infected animals and their contaminated environment plays a key role in determining farm-specific *Salmonella* patterns, which can and must be identified before implementing intervention measures that are capable of reducing the amount of *Salmonella* carried into the food chain via slaughter hogs. Subtyping of selected serotypes has shown that serotyping alone does not allow to conclude on infection chains. DNA-fingerprinting methods help to identify infection sources and to develop targeted prevention measures. Comparing the resistance patterns of *Salmonella* strains isolated from slaughter animals to strains that were isolated from farm environment samples has shown that antimicrobial resistance in *Salmonella* is wide-spread and not only limited to strains from animals that are potentially treated with antimicrobials.

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 This report has not been peer reviewed

For more information contact:

National Pork Board, P.O. Box 9114, Des Moines, Iowa USA

800-456-7675, **Fax:** 515-223-2646, **E-Mail:** porkboard@porkboard.org, **Web:** <http://www.porkboard.org/>