

**Title:** Eliminating the Abattoir Pen Lairages to Decrease the Prevalence of Salmonella in Cull Sows - **NPB #02-129**

**Investigator:** James D. McKean, DVM

**Institution:** Iowa State University

**Date Received:** April 11, 2003

**Abstract:** The objective of this study was to determine the role of the antemortem pens at an abattoir as a preharvest source of *Salmonella enterica* contamination. In this study, consisting of 4 sampling periods from February-April 2002, forty (40) sows were selected for each period at the same concentration point and transported to the abattoir. At the abattoir twenty (20) sows were unloaded and sent directly to harvest, the other 20 held in antemortem pen for 2 hours before harvest. Samples collected from the carcasses included ileo-cecal and, subiliac lymph nodes, cecal and transverse colon contents, pre-rinse carcass sponge swabs, utilizing USDA-FSIS protocol (300 cm<sup>2</sup>), for the right and left carcass sections and a chopped meat block from these carcasses. Samples were screened by an enzyme-linked immunosorbent assay (ELISA), positive at OD value of 0.400 or greater, and confirmed by culture, isolation and identification of Salmonella colonies. The percentage of positive tissue samples from the cull sows held in the antemortem pens (59%) was significantly higher ( $P < 0.05$ ) compared to the direct delivered sows (44%). Percent positive cecal contents from sows exposed to the antemortem pens (55%) were significantly higher ( $P < 0.05$ ) compared to cecal contents of direct delivered sows (39%). The study demonstrates that normal antemortem holding practices contributed to increased *Salmonella enterica* contamination of the digestive tract prior to harvest.

*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 This report has not been peer reviewed*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](mailto:porkboard@porkboard.org), **Web:** <http://www.porkboard.org/>