

Title: Risk informed management of Salmonella in deep tissue lymph nodes – NPB #10-130

Investigator: H. Scott Hurd

Institution: Iowa State University

Date submitted: September 6, 2012

Scientific abstract

The objective of this project was to assess the contribution of deep tissue lymph nodes (DTLNs) to the *Salmonella* contamination of ground pork in the United States. A quantitative risk assessment model was developed that described ground pork production starting from chilled swine carcasses. A scenario analysis was conducted to compare the probability of *Salmonella* contaminated ground pork between baseline and alternative scenarios where three main input parameters related to *Salmonella* contamination in DTLNs were intentionally modified. The scenario analysis showed when the *Salmonella* contamination originated from DTLNs was changed from baseline value to zero, the probability of *Salmonella* contaminated ground pork changed from 8.3% to 7.8%, without the evidence of significance based on t-test. In contrast, the probability of *Salmonella* contaminated ground pork significantly increased when *Salmonella* contamination from carcass surface was increased. Our findings indicate that the deep tissue lymph nodes do not have an influential impact on *Salmonella* contamination in ground pork, compared to other sources such as *Salmonella* on carcass surface. Therefore, the intervention of DTLNs' removal at processing plants might not be able to effectively reduce the *Salmonella* contamination in ground pork.

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 This report has not been peer-reviewed.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 • PO Box 9114 • Des Moines, IA 50306 USA • 800-456-7675 • Fax: 515-223-2646 • pork.org
