

Title: An evaluation of the suitability of porcine lung tissue for human consumption -NPB #13-250

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Date Submitted: April 29, 2015

Scientific Abstract

The objective of this study was to provide evidence of the safety of pork lungs for human consumption via determining the prevalence of potentially pathogenic bacteria and infectious agents known to be prevalent in pork. Specifically, the goal was to collect evidence that could be used to petition the current regulation disallowing saving of pork lungs for human food. Pork lungs have been labeled by the U.S. Meat Export Federation as a widely consumed product across Asia as well as South and Central America. With this said, it is believed that there is profit potential in saving pork lungs and exporting them to the specified countries. Pork lungs must first be deemed safe and edible before they can be sold on the export market.

Lungs were collected from a total of 6 federally inspected pork processing facilities that were specific to killing either young market barrows/gilts or sows. In an attempt to obtain a representative sample of the production facility on an average working day, animals and corresponding lungs were randomly selected throughout the entire production day. All of the lungs collected were removed and processed using aseptic techniques to prevent any exogenous contamination.

The lung samples collected were tested for the prevalence of specific pathogens and other physical contamination. The lungs did not test positive for *Yersenia* spp., *Influenza*, or *Mycobacterium* spp., and they contained low yeast and mold counts. However, multiple samples that were collected from both barrows/gilts and mature sows tested positive for *Salmonella* spp., Shiga toxin-producing *Escherichia coli*, *Campylobacter*, and *Streptococcus suis*. Also, half of the samples collected were found to contain aspirated material within the airways of the lungs. These results suggest that pork lungs are not safe and should not be saved for human consumption.

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 This report has not been peer-reviewed.

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