

**Title:** Evaluation of the efficacy of various intervention methods used by small processors for pork carcasses contaminated with *Salmonella* spp. - **NPB # 02-108**

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**Abstract:** Thirty-three market-age swine harvested at the University of Kentucky abattoir were inoculated with fecal material containing two strains of *Salmonella typhimurium* on the ham, belly, and jowl regions on each side of the carcass. Trial 1 revealed that a 10 s hot water spray was just as effective as the 20 s spray in removing *S. typhimurium*. The shorter flame singe (10 s) was as effective as the 20 s application and the two chlorine solution sprays (100, 200 ppm) had similar results. The 2% lactic acid spray reduced *S. typhimurium* populations significantly more than the 1% treatment.

Trial 2 compared the four most efficient levels of each intervention method. Efficacy of the intervention methods was observed in the following order: Hot water (10 s) > Chlorine (50 ppm) = Lactic acid (2%) > Flame (10 s). The effect of carcass area was significant following the post treatment hot water rinse. The jowl area was least accessible by the high pressure water spray. However after the treatment applications, hot water rinse, and 24 h chill (2°C) there was no significant difference between treated and untreated carcasses or between carcass areas indicating that all treatments followed by proper washing and chilling were acceptable intervention methods.

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