



## Presence of *Salmonella* on Pork Carcasses at Different Time-Points during Harvest in The Bahamas

K. E. Hanlon\*, M. F. Miller, and M. M. Brashears

Department of Animal and Food Sciences, Texas Tech University, Lubbock, TX, USA

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### Objectives

To determine the presence of *Salmonella* on pork carcasses at 3 different processing points during harvest in a commercial abattoir in the Bahamas.

### Materials and Methods

A total of 44 carcasses were sampled between December 2015 and January 2016 at an abattoir in Nassau, Bahamas. Pork carcasses were sampled using sterile swabs pre-enriched with Buffered Peptone Water (BPW) at 3 steps during the harvest process: post-exsanguination, post-scalding (but before singeing), and on entering the cooler. Each targeted harvest step was represented by a composite swab sample of 100 cm<sup>2</sup> that included the ham, belly, and jowl of each carcass. All swabs were transported back to Lubbock, Texas where they were analyzed for *Salmonella* using a commercial real-time PCR assay. All presumptive positive samples were subjected to culture and serological

confirmation. A Chi-square analysis was performed via PROC FREQ on SAS (version 9.4; SAS Inst. Inc., Cary, NC) to compare the frequency of *Salmonella* by harvest step. Significance was detected at  $P \leq 0.05$ .

### Results

*Salmonella* was significantly reduced from 34.1% (15/44) at post-exsanguination to 4.6% (2/44) after scalding and ultimately to 2.3% (1/44) at cooler ready ( $P < 0.0001$ ).

### Conclusion

Our data indicate that process control during harvest managed to significantly reduce the presence of *Salmonella* on the surface of pork carcasses. This information can be used to better understand the frequency of *Salmonella* in pork and develop methods to further manage *Salmonella* on final pork carcasses through the harvest practices used in the Bahamas.