

PORK SAFETY

Title: Evaluation of the microbial safety and shelf stability of country-cured hams
NPB # 98-238B

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ABSTRACT

One hundred sixteen fresh hams each were surface inoculated with a cocktail of either *Listeria monocytogenes*, *Salmonella* spp. (*Salmonella typhimurium*, *Salmonella enteritidis* and *Salmonella choleraesuis*), *Escherichia coli* O157:H7 or *Staphylococcus aureus*. Hams were Country-cured and analyzed for microbial populations before processing, following inoculation and curing, equalization, smoking or non-smoking and after each 28 days during the six months of aging. The *L. monocytogenes* populations decreased from 7.56 LOG₁₀ CFU/cm² to below levels of detection after 206 days. *Salmonella* populations decreased from 7.06 LOG₁₀ CFU/cm² to below levels of detection after 122 days and *E. coli* O157:H7 populations decreased from 8.6 LOG₁₀ CFU/cm² to non-detectable levels after smoking (67days). There were no significant differences in population reduction between smoked versus non-smoked groups except for *L. monocytogenes* (P<0.05) with smoked hams having lower populations at all sample times except after equalization. *S. aureus* populations of 8.57 LOG₁₀ CFU/cm² decreased 2 logs after curing and were below detection after four months of aging. These data provide strong support that current methods for the production of Country-Cured hams are adequate to produce a safe product. However, further research is needed to determine if additional measures beyond those required by USDA regulations are necessary to further enhance assurance of the safety of Country-Cured Hams.

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