Microbial Contamination of Pork Carcasses at The "Dorn Du" Slaughterhouse in Vientiane, Lao PDR

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For a first estimate of microbial contamination of pork carcasses at the largest slaughterhouse of Lao PDR, one carcass every second day (daily slaughter of 70 pigs) was sampled between November 2004 and April 2005. From each of 62 carcasses, pooled swab samples (Swab1 prior to evisceration; Swab2 thereafter) from four sites (ham, back, belly, jaw) and 25g of mesenteric lymph node were collected. Swab samples were cultured for aerobic bacteria, Enterobacteriaceae and Salmonella and lymph nodes for Salmonella.

High levels (4.70 and 4.85 log₁₀ cfu/cm²) of aerobic bacterial counts were obtained in Swab1 and Swab2; respectively, values of 2.81 and 2.98 log₁₀ cfu/cm² Enterobacteriaceae counts were determined. Salmonella prevalence was 46.8% in Swab1, 66.1% in Swab2 and 53.2% of mesenteric lymph nodes. Salmonella serotypes identified were S. Rissen (29.1%), S. Anatum, (26.2%), S. Derby (18.4%), S. Elisabethville (8.7%), S. Amsterdam (7.8%), S. Typhimurium (4.9%), S. Agona (2.9%), and S. Enteritidis (1.9%).

Results indicate pre-slaughter pigs were highly infected with Salmonella and slaughter process was performed under highly unhygienic practices with cross-contamination of carcasses with Salmonella.