

# PREVALENCE AND ANTIMICROBIAL RESISTANCE OF *SALMONELLA* ISOLATED FROM CARCASSES, PROCESSING FACILITIES AND THE ENVIRONMENT SURROUNDING SMALL SCALE POULTRY SLAUGHTERHOUSES IN THAILAND

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**Abstract.** *Salmonella* is a major food-borne pathogen worldwide, including Thailand, and poultry meat plays a role as a vehicle for the spread of the disease from animals to humans. The prevalence and characteristics of *Salmonella* isolated from 41 small scale poultry slaughterhouses in Chiang Mai, Thailand were determined during July 2011 through May 2012. *Salmonella*'s prevalence in live poultry, carcasses, waste water, and soil around processing plants were 3.2%, 7.3%, 22.0% and 29.0%, respectively. Eighteen different serotypes were identified, the most common being Corvallis (15.2%), followed by Rissen (13.9%), Hadar (12.7%), Enteritidis (10.1%), [I. 4,5,12 : i : -] (8.8%), Stanley (8.8%), and Weltevreden (8.8%). Antimicrobial susceptibility tests revealed that 68.4% of the *Salmonella* spp were resistant to at least one antimicrobial while 50.6% showed multiple drug resistance (MDR). Specifically, 44.3% of *Salmonella* were resistant to nalidixic acid, followed by streptomycin (41.8%), ampicillin (34.2%), tetracycline (34.2%), and sulfamethoxazole/trimethoprim (20.3%). *Salmonella* contamination was found in processing lines, carcasses, and in the environment around the processing stations. These findings indicate that improving hygiene management in small scale poultry slaughterhouses as well as prudent use of antimicrobial drugs is urgently needed if *Salmonella* contamination is to be reduced.

**Keywords:** *Salmonella*, small scale poultry slaughterhouse, prevalence, antimicrobial resistance

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