ANTIBIOTIC SENSITIVITY PROFILE OF *Salmonella* spp. ISOLATES IN THE LIVER OF CHICKEN (*Gallus gallus domesticus*, Linn.) FROM A DRESSING PLANT IN TRECE MARTIRES CITY, CAVITE

THESIS

CHESTER JOSHUA VASQUEZ SALDAÑA

College of Veterinary Medicine and Biomedical Sciences
CAVITE STATE UNIVERSITY
Indang, Cavite

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CHESTER JOSHUA VASQUEZ SALDAÑA

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ABSTRACT

SALDAÑA, CHESTER JOSHUA V. April 2008. Antibiotic Sensitivity Profile of *Salmonella* spp. Isolates in the Liver of Chicken (*Gallus gallus domesticus*, Linn.) from a Dressing Plant in Trece Martires City, Cavite. Doctor of Veterinary Medicine, Cavite State University, Indang, Cavite. Adviser: Ma. Cynthia N. Rundina- dela Cruz, DVM, MS.

The study was conducted to determine the antibiotic sensitivity profile of *Salmonella* spp. isolates form the liver of 150 broiler chickens in a dressing plant in Trece Martires City, Cavite and to determine the prevalence rate of *Salmonella* spp among the broilers examined. Two hundred-seventy colonies were isolated from the Xylose Lysine Desoxycholate (Difco®). Morphological characterization revealed that 232 of the 270 isolates were gram negative, rod-shaped organisms. The isolates were further characterized biochemically and were found to possess the following *Salmonella* spp. reactions: Oxidase negative, Alkaline slant/ Acid butt with gas and Hydrogen Sulfide production on Triple Sugar Iron, indole negative with hydrogen sulfide production and motile on Sulfide Indole Motility Medium, Methyl red positive and Voges-Proskauer test negative, citrate utilization positive, nitrate, urease and gelatinase negative. The isolates also fermented glucose, lactose and yield negative result in maltose. The isolates were further characterized serologically using polyvalent O (A-I) and Vi antiserum and result showed that 5 isolates agglutinated the antiserum. On the other hand, these 5 isolates did not agglutinate the Vi antiserum.

All isolates were found to be susceptible to fosfomycin, gentamicin, trimethoprim-sulfamethoxazole and nitrofurantoin but were resistant to lincomycin,

erythromycin, ampicillin and tetracycycline. Intermediate results were obtained with norfloxacin and ciprofloxacin.

The prevalence rate of *Salmonella* spp. in the liver of dressed chickens in a dressing plant in Trece Martires City, Cavite was found to be 3.3%. It is therefore recommended that proper handling practices be emphasized repeatedly from the farm to the household by application of Hazard Analysis Critical Control Point (HACCP) to prevent the organism from entering the human food chain and that indiscriminate use of antibiotics be avoided in food animals.

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ANTIBIOTIC SENSITIVITY PROFILE OF *Salmonella* spp. ISOLATES IN THE LIVER OF CHICKEN (*Gallus gallus domesticus*, Linn.) FROM A DRESSING PLANT IN TRECE MARTIRES CITY CAVITE[1]

CHESTER JOSHUA VASQUEZ SALDAÑA

[1/] An undergraduate thesis manuscript submitted to the faculty of the College of Veterinary Medicine and Biomedical Sciences of Cavite State University in partial fulfillment of the requirements for the degree Doctor of Veterinary Medicine with Contribution no. CVMBS 2007 - 08 - 005. Prepared under the supervision of Dr. Ma. Cynthia Rundina-dela Cruz

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INTRODUCTION

Salmonella is one of the most important pathogens responsible for human food poisoning in the developed world (Cerro et al., 2002) and chicken products are widely acknowledged to be a significant reservoir for *Salmonella.* They have frequently been incriminated as a source of *Salmonellae* contamination and consequently thought to be major sources of the pathogen in humans (Uyttendaele et al., 1998; Baeumler et al., 2000). Furthermore, one of the commonest causes of *Salmonella* infection reported in humans has been through the handling of raw poultry carcasses and products, together with the consumption of undercooked poultry meat (Panisello et al., 2000). In the study