

STUDY ON ANTIMICROBIAL RESISTANCE OF *Salmonella* ISOLATION IN SWINE AND ENVIRONMENTAL FARMS IN HAU GIANG PROVINCE

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Summary

The study was conducted to determine the antimicrobial resistance of *Salmonella* isolated from swine and environmental farms in Hau Giang province. A total of 432 samples which were collected from 183 fecal and 249 environmental samples including food, drinking water, wastewater and floor swabs at some households and pig farms. The result showed that 44/432 samples were positive with *Salmonella* in 10.18% and no significant difference between 2 districts examined. *Salmonella* was isolated from 27/183 fecal samples (14.75%) which were higher than that from 17/249 (6.83%) environmental samples. There was not significant difference in the positive rate of *Salmonella* between households (11.57%) and pig farms (20.97%) and between growth pigs (18.81%) and post weaning pigs (9.76%). However, there was significant difference between diarrheic piglets (52.63%) and healthy ones (10.37%). In 19/249 environmental samples positive with *Salmonella* (6.83%), there were no significant difference of *Salmonella* isolation rate from wastewater (10%), floor swabs (5%), feed (6.35%), drinking water (5.55%). In 35/44 *Salmonella* isolated (79.55%) that were resistant to at least one antimicrobial which the common resistant to ampicillin (70.45%), amoxicillin (63.64%), streptomycin (34.09%), bactrim (27.27%) and gentamycin (22.73%). Out of these strains, 30 *Salmonella* strains (68.18%) were multi-resistant to 2-7 antimicrobials in 15 resistant phenotypes with high diversified and complicated phenotypes, the most predominant phenotype was resistant to 4 antibiotics (29.55%).

Keywords: Antimicrobial, multi-resistance, environment, *Salmonella*, swine, Hau Giang.