

THE PREVALENCE AND THE ANTIBIOTIC RESISTANCE OF EXTENDED-SPECTRUM β - LACTAMASES PRODUCING *Escherichia coli* ON HEALTHY CHICKENS IN SOC TRANG AND TRA VINH PROVINCES

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Summary

The study was conducted from August 2017 to June 2018 to survey the presence of extended-spectrum β -lactamases – producing *Escherichia coli* (ESBL-producing *E. coli*) on healthy chickens in Soc Trang and Tra Vinh provinces. The survey samples were 200 chickens feces, including broilers and layers healthy chickens which were raised at farms and households in both of provinces. The disk combination method (CLSI, 2016) was used to determine the presence of *E. coli* ESBL. The result showed that the presence of *E. coli* ESBL on healthy chickens was 64.50%, in which the presence of *E. coli* ESBL on broilers chickens was 71% and on layers chickens was 57%. Then, 15 *E. coli* ESBL isolates were selected for the investigation of their susceptibility to 9 antimicrobial agents by Ezy MIC^{MT} (Minimal Inhibitory Concentration) strips method. The test showed that resistance was most frequently observed to β -lactams: penicillin (100%), ampicillin and cefuroxime (93.33%). Moreover, these isolates were resistant to 2-6 antibiotics with 4 multidrug-resistant types. However, they were highly sensitive to amoxicillin/clavulanic acid (86.67%) and colistin (73.33%). The analysis of antibiotic resistance genes of 30 positive isolates with *E. coli* ESBL by PCR (Polymerase Chain Reaction) method showed that the presence of OXA and PER genes was 26.67% and 53.33% respectively. Bacteria owned OXA or PER gene alone were 20% and 60% respectively while that hold both OXA+PER simultaneously was 20%.

Key words: *E. coli* ESBL, antibiotic resistance, broiler, layer, OXA gene, PER gene.