ANTIBIOTIC SENSITIVITY PROFILE OF *Escherichia coli* 0157 ISOLATES FROM THE FECES OF NATIVE GOATS (*Capra hircus* L.) FROM SELECTED FARMS IN CAVITE

THESIS

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ABSTRACT

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This study aimed to isolate *Escherichia coli* O157 in the feces of Philippine native goats (*Capra hircus* L.) from selected areas in Cavite. One hundred eight (108) fecal samples were collected from Imus, Naic, General Trias and Indang, Cavite and were subjected to cultural, morphological, biochemical, and serological analysis. While this study was designed to isolate *E. coli* O157: H7, only *E. coli* O157was isolated. Two isolates were confirmed to be *Escherichia coli* O157 with a prevalence rate of 1.85%. Antibiotic Susceptibility Test using the disk diffusion method showed susceptibility of the test organism to all antibiotic discs used except for one isolate which showed intermediate susceptibility to erythromycin. This study is the first report on the presence of *E. coli* O157 in native goats in Cavite and hence, showed that these animals may serve as a source of infection.

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INTRODUCTION

Escherichia coli (*E. coli*) is a facultative anaerobic Gram-negative bacteria of the family *Enterobacteriaceae*. This bacterium is established in the gastrointestinal tract of warm-blooded animals a few hours or days after birth and persists in both healthy and diseased animals (Todar, 2012). Strains of *E. coli* are divided into six groups based on their virulence, namely enteroaggregative (EAggEC), enterohemorrhagic (EHEC), enteroinvasive (EIEC), enteropathogenic (EPEC), enterotoxigenic (ETEC) (Hirsh, 1999) and diffusely adherent (DAEC) (Buchanan and Doyle, 1997). Most strains do not cause disease but EHEC can result to severe foodborne disease in humans (WHO, 2011). Strain O157: H7, in particular, is the prototype EHEC that causes diarrhea in humans which usually convalesce uneventfully in a few days or may lead to a systemic disease known as hemolytic uremic syndrome (HUS) in about 8% of cases (Rowe, *et al.*, 1998 in Li, *et al.*, 2000).