

ANTIBIOTIC SENSITIVITY PROFILE OF *Escherichia coli* O157 ISOLATES
FROM THE FECES OF NATIVE GOATS (*Capra hircus* L.)
FROM SELECTED FARMS IN CAVITE

THESIS

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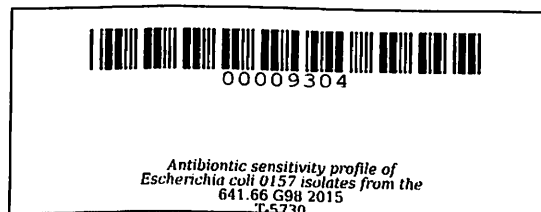
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March 2015

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Undergraduate Thesis
Manuscript Submitted to the Faculty of the
College of Veterinary Medicine and Biomedical Sciences,
Cavite State University

In Partial Fulfillment
of the requirements for the
degree Doctor of Veterinary Medicine



XYNA ANN GARCIA GUTIERREZ
March 2015

ABSTRACT

GUTIERREZ, XYNA ANN G. Antibiotic Sensitivity Profile of *Escherichia coli* O157 Isolates from the Feces of Native Goats (*Capra hircus* L.) from Selected Farms in Cavite. Undergraduate Thesis. Doctor of Veterinary Medicine. Cavite State University, Indang, Cavite. April 2015. Adviser: Dr. Ma. Cynthia Dela Cruz.

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* O157 was 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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An undergraduate thesis manuscript submitted to the faculty of the College of Veterinary Medicine and Biomedical Sciences, Cavite State University, Indang, Cavite, in partial fulfillment for the degree of Doctor of Veterinary Medicine. Prepared under the supervision of Dr. Ma.Cynthia Rundina – Dela Cruz. CVMBS2014-201506

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 (EAaggEC), 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).