



**BUSITEMA  
UNIVERSITY**  
*Pursuing Excellence*

**PREVALENCE OF *CYSTICERCUS TENUICOLLIS* IN GOATS AND SHEEP  
SLAUGHTERED IN LIRA MUNICIPAL ABATTOIR, LIRA DISTRICT**

**BY**

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**JUNE, 2014**

**DECLARATION**

I, **Magala Joseph**, declare that this dissertation is original and has not been submitted to another university or any other institution of learning for any academic award.

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**APPROVAL**

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## DEDICATION

This special report is dedicated to the family of **Mr. B.M Migadde and friends** for their moral, spiritual, material and financial support for my education. May the Almighty God reward them abundantly.

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## ABSTRACT

*Cysticercus tenuicollis* is a metacestode stage of *Taenia hydatigena* residing in visceral organs of small ruminants and its effects cause economic losses due to condemnation of visceral organs in the slaughter places. This study reports on the prevalence of *Cysticercus tenuicollis* in small ruminants slaughtered in Lira Municipal Abattoir. A total of 140 sheep and goats were sampled and examined after slaughter for presence of *Cysticercus tenuicollis* in the visceral organs using standard meat inspection procedures. Data was recorded using an abattoir data collection sheet and analysed in SPSS version 17. Thirty six (36) goats and 48 sheep were infested with *Cysticercus tenuicollis*. The overall prevalence of *Cysticercus tenuicollis* was found to be 60%; 51.4% in goats and 68.6% in sheep, ( $P < 0.05$ ). Otake district was seen to have the highest prevalence of the parasite (82.6%), followed by Kole with (72.4%), Alebtong (66.7%), Apac 59.4% and Lira (31.4%) ( $P < 0.05$ ). *Cysticercus tenuicollis* was more frequently seen on the intestines (57.8%) of sheep and goats than on any other visceral organs. The liver had a prevalence of 20.7%, the lungs 17.8%, the kidneys 3.5% and the fetal sac; (15.7%) in goats and (12.9%) in sheep. It's recommended to safely dispose off all the condemned abattoir materials. The sale of the condemned parts of sheep and goats and the feeding of dogs on these contaminated materials should be stopped forthwith. It's also being suggested that a national study be carried out to determine the prevalence and economic impact of *Cysticercus tenuicollis* in small ruminants.

## CHAPTER ONE

### INTRODUCTION

#### 1.1. Background

Africa has a population of 205 million sheep and 174 million goats representing approximately 17% and 31% of the world total, respectively (FAO, 1995). Within Africa, the distribution of small ruminants varies widely, with a higher concentration found in dry areas than in humid areas. Despite their higher contribution to the total world livestock population, sheep and goats produce only about 16% of the world's meat. Small ruminants are important domestic animals in the tropical animal production system (Devendra and McIeroy, 1987).

Disease causes extensive financial wastes as a result of direct and indirect economic losses, and it is a major concern to the small ruminants industry. Studies conducted in different abattoirs of Ethiopia revealed that parasitic infestations are found to be the major causes of organs condemnation, with an approximate annual loss of \$2.7 million (Wondimu *et al.*, 2011). Even though various investigations have been conducted through abattoir survey to determine the prevalence of parasitic infestations, most of the survey focused on cases such as hydatidosis and fasciollosis (Yimam, 2003). This has made *Cysticercus tenuicollis* one of the neglected infestations without quantifying its effects.

*Cysticercus tenuicollis* is a metacestode stage of the adult internal parasite of dogs called *Taenia hydatigena*. This metacestode resides inside ruminant animals. Normally, they are observed during carcass inspection as cysts loosely filled with transparent fluid usually found in the abdominal viscera attached to the cavities of the abdominal viscera and livers of infested animals. Ruminants are the intermediate hosts of *Cysticercus tenuicollis* while canines are the definitive hosts (Singh *et al.*, 2013). *Cysticercus tenuicollis* has an important economic loss due to condemnation of visceral organs in the slaughter places. The transmission of *Cysticercus tenuicollis* occurs most commonly in environments characterized by poor sanitation, poor livestock husbandry practices and high abundance of stray dogs. Traditional husbandry practices, inadequate meat inspection and management and control policies favour transmission of the parasite (Budka *et al.*, 2004). Epidemiological data on the sole impact of the infestation is, however limited, in Lira district.

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