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**PREVALENCE OF HYDATIDOSIS AND TAENIA HYDATIGENA IN  
SLAUGHTERED SMALL RUMINANTS AT SANGA TOWN COUNCIL ABATTOIR,  
KIRUHURA DISTRICT, UGANDA**

**BY**

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## DECLARATION

I **MUGWANYA JULIUS SSALI** declare that this dissertation is an affirmation of the research activities I carried out as a partial requirement for the award of the Bachelor of Animal Production and Management of Busitema University and that this report has never been submitted to any university or other institution of learning for any academic reward.

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The research process up to documentation of this report has been developed under the guidance and supervision of an academic supervisor and the approval thereafter

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## **DEDICATION**

I dedicate this report to my mother, Ms. Mbabazi Glorious for her sacrifice and commitment to support my academics till this far, my fellow AMP3 students and my academic supervisor, Dr.Omadang Leonard for his technical guidance during preparation of this dissertation, I wish every one of the mention the best of his or her wish.

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## LIST OF ABBREVIATIONS

cm.	Centimetre
E	East
C.T	CysticercusTenuicollis
N	North
C.E	Cystic Ecchinococcosis
P-value	Probability value
<	Less than
>	Greater than
PAP	Pastoral and Agro-Pastoral
BCS	Body Condition Scoring
MAAIF	Ministry of Agriculture Animal Industry and Fisheries.
UBOS	Uganda Bureau Of Statistics

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## ABSTRACT

**Aim:** Echinococcosis or hydatidosis (due to the larval stage of *Echinococcus* spp.) and cysticercosis (due to the larval stage of *Taenia hydatigena*) poses a significant economic losses due to slaughter condemnation and ante-mortem effects such as weight loss, emaciation among others in developing countries such as Uganda where sanitation is poor and people live in close proximity with each other and with animals. This study was conducted to determine the prevalence of Hydatidosis and *Taenia hydatigena* cysticercosis in sheep and goats slaughtered at Sanga town abattoir located in the areas of L.Mburo National Park, Kiruhura District, Uganda.

**Materials and Methods:** A cross-sectional based survey was conducted, from March 2018 to May 2018, whereby a total of 329 animals comprising 262 goats and 67 sheep of both sexes were examined at post-mortem for the evidence of larval stages of *Echinococcus* spp. (hydatid cyst) and *T. hydatigena* (*Cysticercus tenuicollis*) through visual inspection, incision and palpation of organs and viscera.

**Results:** The overall prevalence of echinococcosis was 1.8% with 0.8% and 6.0%, in goats and sheep, respectively, while the overall infection rates for cysticercosis were 27.5% in goats and 43.3% in sheep. The result of this study revealed that goats and sheep from Sanga sub county had significantly higher prevalence of *T. hydatigena* (*C. tenuicollis*) and hydatid cysts ( $p < 0.05$ ) compared to other sub counties. The lungs and the liver were the most affected with 75% and 25% respectively and the result of the study also revealed that goats and sheep more than two years old had the highest prevalence and *T. hydatigena* (*C. tenuicollis*) cysts were more frequently detected in the omentum than other visceral organs among the animals examined.

**Conclusion:** In conclusion, the observed high prevalence of the two metacestodes larval stages leads to high condemnation rates of edible offals and ante-mortem losses due to weight loss among others in domestic ruminants. This underscores for the need to undertake more extensive epidemiological investigations to better determine the causal factors, economic impact, and public health importance of the disease in this Pastoral and Agro-pastoral setting.

# CHAPTER ONE

## INTRODUCTION

### 1.0 Back ground

Hydatidosis is a serious medical and veterinary problem in many countries, particularly those with rural communities where there is a greater contact between dogs and domestic animals(Almalki *et al.*, 2017).

*Cystercercustenuicollis* (C.T) also called *Taeniahydatigena* and hydatidosis also called Hydatid cyst or Cystic Echinococcosis(C.E) are larval stages of the canine tapeworm *Taeniahydatigena* and *Echinococcusgranulosus*, respectively(Miran *et al.*, 2017). They are caused by the cystic larval stages of the dog tape worm of different genera, that is Echinococcus for *Echinococcusgranulosus* and taenia for *taeniahydatigena*(Alaa, 2014). They affect both domestic ruminants like goats and sheep and wild ruminants like impalas (intermediate hosts) and sometimes man accidentally and canids most commonly dogs (definitive hosts) in the tropics and wolves and coyotes in the temperate regions(Abdullahi *et al.*, 2011).

They are considered as one of the major causes of economic losses through organ condemnation especially liver, lungs, heart and intestines through organ (mostly liver, lungs, heart and intestines) and productivity of livestock in both the developing and industrialized world(Radfar *et al.*, 2005). The intermediate hosts contract infections by ingesting pasture and water contaminated with dog faecal matter containing eggs(Harandi, Budke, & Rostami, 2015; Miran *et al.*, 2017). Infections due to hydatid cysts are estimated to affect approximately 2-3 million people worldwide, with Africa amongst the primarily endemic regions(WHO, 2010). In Africa, these infections are distributed in the dry, arid and semi-arid countries which practice mainly nomadic pastoralism (Brunetti, 2016).

In Uganda studies about hydatidosis have been done for example Othieno *et al.*, (2017) found out 2.15% in humans in Kasese and limited in livestock for example a study by Nyero *et al.* (2015) in Soroti district found out that hydatidosis was at 33.33% in goats and 42.5% in sheep. It is against this background that this study was designed to determine the prevalence of C.E and C.T among shoats in Sanga, Kiruhura district, Western Uganda.

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