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**PREVALENCE OF BOVINE TUBERCULOSIS AMONG CATTLE SLAUGHTERED AT  
SOROTI MUNICIPAL ABATTOIR BASED ON POSTMORTEM EXAMINATION**

**BY**

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**A DISSERTATION SUBMITTED TO THE FACULTY OF AGRICULTURE AND ANIMAL  
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OF A BACHELORS DEGREE IN ANIMAL PRODUCTION AND MANAGEMENT OF  
BUSITEMA UNIVERSITY**

**JULY, 2018**

## DECLARATION

I, ASASIIRA YONAH hereby declare that this dissertation is my own original work and to the best of my knowledge and has never been submitted to any other institution for any academic award.

Signature *Asasiira Yonah* Date 18/8/18



## APPROVAL

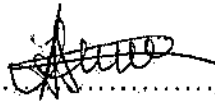
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## **DEDICATION**

I dedicate this report to my guardians. Mr. & Mrs. NUWAMANYA FRED, brothers and sisters, friends and relatives for the financial support and advice given to me throughout the hectic research period. I love you all.

I also dedicate this report to all members of staff Busitema university Arapai campus for the guidance, advice, courage and support towards my success during the research period.

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## LIST OF ABBREVIATION

AFB	Acid fast bacteria
BCG	Bacille Calmette Guerin
BTB	Bovine tuberculosis
CMI	Cell mediated immunity
ELISA	Enzyme linked immunosorbent assay
EU	European Union
LN	Lymph nodes
M	Mycobacterium
MTC	Mycobacterium tuberculosis complex
OIE	Office Internationale epizooties
PCR	Polymerase chain reaction
PMI	Post mortem inspection
PPD	Purified protein derivative
SICCT	Single intradermal comparative cervical tuberculin
TST	Tuberculin skin test
WAHID	Worldwide animal health information data base
WHO	World health Organization

## ABSTRACT:

The study on Bovine Tuberculosis (BTB) was conducted in cattle slaughtered at Soroti Municipal Abattoir located in Soroti Municipality with the main objective of determining its prevalence. During this time, ante mortem and post mortem inspections were carried out. A total of 245 cattle were inspected; their breed, sex and ages were recorded before slaughtering and of the total animals, 0.4% (1/245) were found to be with tuberculous lesions especially in the lungs whereas in other organs there were no changes observed. In cattle < 2 years and 2-4 years, there were no infection indicated 0% whereas cattle >4-7 years was 0.4%. Out of 22 cross breed inspected only 1 was positive with 4.54% prevalence and out of 223 zebu breed inspected all were negative with 0% prevalence and among the sex out of 140 males inspected, none was positive and it indicated 0% whereas 105 females inspected only 1 was positive with 0.95% (Table 3.)

This study demonstrated the prevalence of BTB in cattle slaughtered at Soroti municipal abattoir by routine postmortem inspection to be 0.4%, There for the carcass must be examined thoroughly to reduce the chances of transmission to humans who consume meat. It is recommended that integrated preventive approaches involving enhanced surveillance of the disease through establishment of standardized abattoirs well-equipped with laboratory facilities should be installed. Intensive meat inspection should be done in other abattoirs to establish the disease prevalence in slaughtered cattle in the country to ensure food safety.

## CHAPTER ONE

### 1.0 INTRODUCTION

#### 1.1 Background of the study

Bovine tuberculosis (BTB) is a chronic debilitating granulomatous disease caused by *Mycobacterium* that has been a major health risk to man and animals for more than century. It is widely distributed throughout the world affecting all age groups of animals and humans (Ewnetu, Melaku, & Birhanu, 2012). It is a major economic animal health problem worldwide, costing US\$3 billion annually, with >50 million cattle infected. Costs from this disease are related to a reduction in productivity in severely affected animals, testing, culling of affected animals, movement controls, and restriction on trade (Parlane & Buddle, 2015).

BTB is present in almost all African countries, affecting both domestic and wild animals (Daborn and Grange;2014) it was reported that the disease was prevalent in 33 (80%) of 43 African member countries of the regional commission of the Office International des Epizooties (World Organization for Animal Health, OIE) (Ayel *et al.*, 2004). In Uganda, Vekemans *et al.* reported purified protein derivative (PPD) test of cattle, with 13% positive reactions and isolation of mycobacteria in 26% of 60 retailed milk samples collected in markets. Jiwa *et al.* reported a 0.2% prevalence of bovine TB in the Lake Victoria area of Tanzania. Some affected species, including African buffalo in the Queen Elizabeth National Park in Uganda proved to act as maintenance host for *M. bovis* (Michel *et al.*, 2006).

The average number of extra pulmonary bovine tuberculosis cases in humans in 2002 considered a crude indicator of the level of bovine tuberculosis was 7.5% of all tuberculosis cases for Uganda and 6% for Mbarara district, an important area that supplies most of the milk and meat to the country (Nasaka, 2014).

BTB is characterized by the formation of nodules called tubercles whose location depends largely on the route of infection. In calves, transmitted by ingestion and lesions involve the mesenteric lymph nodes with possible spread to other organs. In older cattle, infection is usually transmitted by the respiratory tract (inhalation) with lesions in the lung and dependent lymph

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