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**FINAL YEAR PROJECT REPORT**

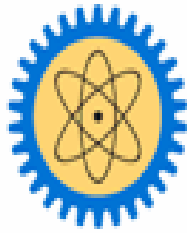
**THE EPIDEMIOLOGY OF RUMINAL AND RETICULAR**  
**FOREIGN BODIES AMONG CATTLE SLAUGHTERED AT**  
**LIRA AND SOROTI CITY ABATTOIRS**

**By**

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**This Research Dissertation is submitted to the Faculty of Agriculture and**  
**Animal Sciences in Partial Fulfillment of Requirements for the Award of**  
**the Degree of Bachelor of Animal Production and Management of Busitema**  
**University**

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**BUSITEMA  
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## **FINAL YEAR PROJECT REPORT**

# **THE EPIDEMIOLOGY OF RUMINAL AND RETICULAR FOREIGN BODIES AMONG CATTLE SLAUGHTERED AT LIRA AND SOROTI CITY ABATTOIRS**

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## ABSTRACT

A cross sectional study was conducted on cattle slaughtered at Lira and Soroti city abattoirs from September to November 2022 to determine the prevalence, types and quantity of foreign bodies in rumen and reticulum. The research took a quantitative approach. Ante mortem and Postmortem examinations were employed during this study. Frequencies (percentages) for categorical variables were calculated and chi-square test used for comparison. From a total of 390 (159 female and 231 male) cattle examined, 187(47.9%) of the examined animals turned positive of foreign bodies while 203 (52.1%) were negative. There was a higher prevalence (62%) of foreign bodies in female than in male cattle (38%). A higher percentage (53%) of foreign bodies were found in crossed bred animals compared to 47% found in indigenous. From the three age groups examined, the prevalence was higher (59.3%) in animals in the old age group than the adult (41.2%) and younger groups (20.6%). Foreign bodies were recorded in greater percentage (80%) in animals with poor body condition than those with moderate (59%), good (49%), fat (34%) and grossly fat (33%) body condition. Similarly higher percentages (48%) were found in animals managed extensively than those kept under semi-intensive system (42%). Much of the foreign bodies lodged in the rumen (90%) than in the reticulum (10%). Plastics (31.6%) were recovered as the most common foreign bodies and followed by cloths (16%), sac thread (12.3%), leather pieces (11.2%), rope (8%), hair balls (7.5%), nails (7%), wire (4.8%) and needle (1.6%). It is concluded that the discovery of this level of occurrence of foreign bodies in cattle have great health and economic significance associated with high mortality and morbidity, reduced production and productivity. Therefore, awareness should be created on careless disposal of foreign materials as well as the periodical cleaning of these wastes in the grazing to prevent health risk of ruminants and also to protect the environment. Furthermore, these risks can also be avoided by prevention of nutritional deficiencies. Strict legislations regarding the proper disposal of wastes from households and factories should be applied to reduce pollution of the environment.

**Keywords:** Abattoir, Lira, Soroti, cattle, foreign body, reticulum, rumen, prevalence.

## DECLARATION

I, ADOKO JACOB, do declare that this research dissertation is my own original copy and has never been reproduced or submitted to any other institution for an academic award.

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Date.....

## **APPROVAL**

This research dissertation was carried out by me under the maximum supervision of Dr. Hellen Kisakye and has been submitted for examination with her approval.

Academic supervisor: Dr. Hellen Kisakye

Signature.....

Date.....

## **DEDICATION**

This work is dedicated to my dear Father, Mother, Wife, Children and to all my friends for their relentless efforts to the successful completion of this milestone. I hope this will inspire me to work hard in my academic strides.

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## LIST OF ABBREVIATIONS

HOD:	Head of Department
DPMO:	District Production and Marketing Officer
GDP:	Gross Domestic Product
SPSS:	Statistical Package for Social Sciences
UBOS:	Uganda Bureau of Statistics
FBS:	Foreign Body syndrome
IFB:	Indigestible Foreign Bodies
IFOs:	Indigestible foreign objects
AM:	Ante mortem
PM:	Postmortem
TP:	Traumatic pericarditis
TRP:	Traumatic reticuloperitonitis
VFA:	Volatile fatty acid
CI:	Confidence Interval
E.g:	For example
I.e:	That is
Etc:	Et cetera

# CHAPTER ONE

## INTRODUCTION

### 1.1. Background

Livestock farming is a major component of the agriculture industry in Uganda contributing 9% and 17% to the total and agricultural Gross Domestic Product (GDP) respectively (UBOS, 2010). Livestock are a source of high-quality protein (meat, milk and eggs) and also contribute to the economic welfare of people by providing hides, skins, fertilizer, power and traction for agricultural purposes, increasing the productivity of smallholdings (Banda & Tanganyika, 2021). The major livestock species kept in Uganda include cattle, sheep, goats, pigs, and rabbits. However livestock support is beneath what would-been due to prevalent livestock diseases, poor management system and poor genetic performance (Agriterria, 2012).

Free grazing animals ingest plastic bags especially which are indigestible and their accumulation in the rumen of grazing animals may lead to adverse effect on health (Farooq et al., 2020). Foreign body Ingestion in cattle is a situation of pronounced economic significance as it effects to loss of production and great mortality tolls (Bwatota et al., 2018; O.M. Radostits, C.C.Gay, K. W. Hinchcliff, 2007). Goats and Sheep are exceedingly careful feeders and consume considerably fewer amount of foreign bodies as matched to cattle (Roman Tiruneh, 2010).

Foreign bodies consumed by cattle falls into two key groups; the first category being metallic and the second non-metallic (Ravindra R.Y., 2014). Detrimental effects comprise reduced feed consumption, interference of ingesta movement resulting to rumen enlargement and no fecal excretion, inability to absorb the valuable volatile fatty acids, abridged weight gain rate, inner injuries and death succeeding intestinal blockage (Negash et al., 2015). Non-metallic incomprehensible reticulo-ruminal foreign bodies cause repeated tympany in mature dairy cattle. Reportedly in Jordan a valued \$25 million loss in ruminant throughput and health related with foreign body impaction (Negash et al., 2015). As ruminal impaction resulting from buildup of incomprehensible materials is habitually asymptomatic and can be diagnosed in living animals only if gathered in greater quantity, it can be studied sufficiently at the abattoirs (Otsyina et al.,

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