

P.O.Box 236, Tororo Gen:+256-454448842 Dir: +256-454448864 Mob: +256-782999874 Fax: +256-454436517

Email:ar@acadreg.busitema.ac.ug Website:www.busitema.ac.ug

PREVALENCE OF TRYPANOSOMIASIS IN ANEAMIC CATTLE AS A CHALLENGE TO CATTLE OWNERS OF BUTANSI SUB-COUNTY, KAMULI DISTRICT IN EASTERN UGANDA

 \mathbf{BY}

AYESIGA STENISLAUS

BU/UP/2017/175

APM 3

sayesiga2016@gmail.com

A DISSERTATION SUBMITTED TO THE FACULTY OF AGRICULTURE AND ANIMAL SCIENCES IN PARTIAL FULFILLMENT OF AN AWARD OF A BACHELOR'S DEGREE IN ANIMAL PRODUCTION AND MANAGEMENT OF BUSITEMA UNIVERSITY

FEBRUARY, 202I

1	\Box	F	C1	\mathbf{A}	R	Δ	$\Gamma \mathbf{I}$	١	ν.	ľ
		4 67		. –	1	\rightarrow		, ,	•	4

Student

I hereby declare that this work is truly my original work and it has never been submitted in any institution for any academic award.

AYESIGA S'	ΓENISLAUS
Signature	
Date	
This research pro	oposal thesis is submitted by the approval of
My supervisor	
DR. OMADAN	G LEONARD
Signature	Date

DEDICATION

I dedicate this research report to my Husband and Mr. Barongo Josephat, my family and friends not forgetting my colleagues in the struggle. May the Almighty God reward you greatly.

ACKNOWLEDGEMENT

I thank JEHOVAH Almighty for His Grace, for the blessings and for being my source of strength to carry out this work. Thank you Father.

I am grateful to Busitema University for the guidance and support from the Animal department in the faculty of Agriculture and Animals sciences most especially Dr. **Omadang Leonard** and not forgetting my course mates, fellow students and colleagues of APM for the encouragement throughout the course.

I am also grateful for the staff of Kamuli district veterinary lab especially Mr.Barongo Josephat for the assistance during field work and lab work. I would also want to thank farmers for their co operation and accepting to use their animals for the study.

TABLE OF CONTENT

DEC	CLA	RATION	i
DEI	DIC.	ATION	. ii
ACl	KNO	OWLEDGEMENT	iii
LIS	T O	F TABLES	vii
LIS	T O	F FIGURES	vii
LIS	T O	F ABBREVIATIONS	⁄iii
ABS	STR	ACT	ix
СН	APT	ER ONE: INTRODUCTION	. 1
1.	.0.	Introduction	. 1
1.	.1	Background	. 1
1.	.2	Research Problem	. 2
1.	.3	General Objective	. 3
1.	.4	Specific Objectives	. 3
1.	.5	Research Questions	. 3
1.	.6	Contribution	. 3
1.	.7	Rationale	. 4
1.	.8	Scope	. 4
CAI	НРТ	ER TWO: LITERATURE REVIEW	. 5
	2.1	Animal African trypanosomisis	. 5
	2.2	The tsetse fly	. 5
	2.3	Trypanosomes	. 6
	2.3	.1 Structure of a Trypanosome	. 7
	2.3	.2 Invasion of a Trypanosome into the blood stream.	. 7
	24	Diagnosis	8

	2.5 Spread of trypanosomiasis in Uganda	8
	2.6 Economic challenges associated with tsetse flies	9
	2.7 Prevention and control	. 10
CF	IAPTER THREE: MATERIALS AND METHODS	. 12
	3.1 Description of study area	. 12
3	3.2 Research approach:	. 12
3	3.3 Sampling design:	. 12
	3.3.1 Cattle sample calculation.	. 12
	3.3.2 Blood sample collection	. 13
	3.3.3 Trypanosoma detection and microscopy	. 13
3	3.4 Operational design:	. 13
3	3.6 Observational design:	. 13
3	3.7 Statistical design:	. 14
3	3.8 Data analysis and presentation	. 14
3	3.9 Ethical Consideration	. 14
3	3.10 Environmental Considerations	. 14
CF	IAPTER FOUR: RESULTS	. 15
2	4.1 Prevalence of trypanosome infections in cattle	. 16
2	4.2 The animals that tested positive according to parishes in the study	. 17
4	4.3 Trypanosomiasis infection according to Sex	. 18
2	4.4 Trypanosomiasis infection according to Age	. 19
CF	IAPTER FIVE: DISCUSSION OF RESULTS	. 20
]	DISCUSSION	. 20
CF	IAPTER SIX: CONCLUSION AND RECOMMEDATIONS	. 22
(5.1 CONCLUSION	. 22

6.2 RECOMMENDATIONS	
References:	I
APPENDICES	VI
APPENDIX I	VI
APPENDIX II	VII
APPENDIX II	VIII

LIST OF TABLES AND LIST OF FIGURES

Table 1 THE LAB RESULT FOR TRIPS CATTLE AMONG THE PARISHES 16
Table 2 : SHOWING PERCENTAGE OF POSITIVE CATTLE AMONG PARISHES 17
Table 3 SHOWING THE LAB RESULTS FOR TRYPANOSOMIASIS WITH THE SEX OF
THE TESTED ANIMALS
Table 4 SHOWIN AGE OF ANIMALS (YEARS) OF THE ANIMALS THAT TESTED
POSITIVE
Table 5 : DATA COLLECTION SHEETVI
Table 6 : RESEARCH WORK PLANVII
Table 7 RESEACH BUDGETVIII
Figure 1 : THE LIFE CYCLE OF TSETSE FLY
Figure 2 THE DISTRICTS OF UGANDA THAT ARE FOUND WITHIN THE CATTLE
CORRIDOR AND HIGHLY PANDEMIC AREAS OF THE DISEASE INCLUDING KAMULI
DISTRICT11
Figure 3 DESCRIPUTION OF THE STUDY AREA
Figure 4 : SHOWING THE LAB RESULTS FOR TRIPS
Figure 5 SHOWING THE COMPARISON IN PERCENTAGE OF THE POSITIVE ANIMALS
AMONG THE PARISHES OF BUTANSI SUB-COUNTY
Figure 6 SHOWING PERCENTAGE OF POSITIVE ANIMALS ACCORDING TO SEX 19

LIST OF ABBREVIATIONS

SSA sub-Saharan Africa

HAT Human African trypanosomiasis

AAT African animal trypanosomiasis

GDP domestic product

AT African trypanosomosis

VSG variant surface glycoprotein

VAT variant antigenic type

rAAT Animal African Trypanosomiasis reservoir

EATRO East African Trypanosomiasis Research Organization

WHO World Health Organization

ABSTRACT

The study was conducted in Butansi sub county, Kamuli district in Eastern Uganda in the month of December, 2020, to know the prevalence of trypanosomiasis in Anaemic cattle that has caused big losses to the farmer in cattle production. The study was conducted to compare the prevalence according to the village within the study area, infection according to age and sex of the animals. The data was collected from 90 animals in the villages of Bubogo, Bugombya, Buluke, Bulunga, Ntansi. Microscopy was carried out by Haemotocrit centrifugation was used for trypanosomiasis test. The results showed a prevalence of 48.9% of the tested anaemic cattle, with 59.09% female 40.91% males, and age of 1, 2, 3, 4, 5, 6 years as 9.1%, 15.9%, 20.5%, 29.5%, 20.5%, 20.5%, and 4.5% respectively. Here its recommended for appropriate control efforts should be put in place to prevent escalation of trypanosomiasis in this area and Government should enforce frequent mass treatment in the area and train the farmers through local Organizations and extension services on the prevention measures of trypanosomiasis.