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THE PREVALENCE OF TUBERCULOSIS LIKE LESIONS IN CATTLE FROM PROTECTED KRAALS;

A CASE STUDY OF MOROTO MUNICIPAL ABATTOIR

BY

OBIN GORDON

REGISTRATION BU/UG/2013/135

Email.obingordon@yahoo.com

Tel. +256 775 350 504

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

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DECLARATION

I, OBIN GORDON, REGISTRATION NUMBER BU/UG/2013/135 declares that this thesis is an affirmation of the research activities I carried as a partial requirement for an award of a degree of bachelor of Animal production and management of Busitema University and that this report has never been submitted to any university or other institutions of learning for any academic purpose.

Signature.....Date.....14th/08/2016.....

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

Academic supervisor;

Dr. EMMANUEL WALUSIMBI (BVM (MUK), Msc Livestock Dev't planning & mgt (MUK)

Teaching Assistant at the department of Animal Production and Management, Faculty of Agriculture and Animal Sciences, Busitema University

Signature..... Date.....14/08/2016.....

DEDICATION

I dedicate this report to my parents Mr. and Mrs. Omega, my dear siblings Awidi Evalyn, Okech Innocent, Achen Vicky, Okwii Calvin Owiny Isaac and Agenorwot Jacklin together with Moroto Municipal Council and Busitema University.

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TABLE OF CONTENTS

LIST OF ABBREVIATIONS AND ACRONYMS

APM	:	Animal Production and Management
BCG	:	Bacilli Calmette-Guérin
BTB	:	Bovine Tuberculosis
C&D	:	Institute for international Cooperation and Development
CDC	:	Center for Disease Control
CIS	:	Community Information System
Dept	:	Department
DPMO	:	District Production and Marketing Officer
DVO	:	District Veterinary Officer
FAAS	:	Faculty of Agriculture and Animal Sciences
FAO	:	Food and Agricultural Organization of the United Nations
FMD	:	Foot and Mouth Disease
GPS	:	Global Positioning System
LG	:	Local Government
M. bovis	:	Mycobacterium bovis
MTC	:	Mycobacterium Tuberculosis Complex bacteria
N	:	Number
NGOs	:	Non-Governmental Organizations
PM	:	Postmortem

SN	:	Serial Number
TB	:	Tuberculosis
TST	:	Tuberculin Skin Test
UK	:	United Kingdom
UN	:	United Nations
UNOCHA	:	United Nations Office for Coordination of Humanitarian Affairs
UPDF	:	Uganda Peoples Deafens Forces
WHO	:	World Health Organization

LIST OF TABLES

Tables

LIST OF FIGURES

Figures

ABSTRACT

The study was to determine the prevalence of Tuberculosis like lesions in cattle from protected kraals of Moroto district through post-mortem inspection in Moroto Municipal abattoir by examining clinical and subclinical lesions of organs like tonsils, lungs, liver, spleen, kidneys, cavities and lymph nodes that drain them with the main objective of determining presence and prevalence rate of bovine tuberculosis in protected kraals. The study was carried out in a period of three weeks.

The results obtained showed that more cattle originated from protected kraals (95.4% of all slaughters came from kraals) only 4.6% came from homesteads. Equally all the cases with positive bovine TB lesions were from protected kraals, i.e. 6 cattle representing 5.6 % of all slaughtered cattle and 5.8 % of cattle from protected kraals. Observations were made on all the cattle slaughtered during the time of study totalling to 108 cattle

The protected kraals in Moroto are similar in operation to all other protected kraals in pastoral areas of karamoja and this system was introduced during the disarmament program in Karamoja in the early 2000 where animals from several herds are confined into same paddocks during night protected by UPDF, yet herd mixing has been seen as a major risk factor for bovine TB spread. Thus this study was to investigate the relationship between protected kraals and BTB incidences. This results proves that protected kraals increase the risk to bovine TB.

The conditions in protected kraals features mixed herds from several households and different age groups, large stock size, animals closely interacting with humans, poor/lack of adherence good livestock management practices and transhumance system of livestock keeping.

The major challenge was difficulty in detection of non-obvious lesions in the abattoir thru reliance on only gross pathological lesions; this can be improved in future by establishing a laboratory for the abattoir.Note that TB here means bovine TB.

Key recommendations drawn from this study targets the local government and other stakeholders in karamoja region, these include sensitization of pastoral communities on BTB, need to establish and fully equip a veterinary laboratory at Moroto Municipal abattoir for effective diagnosis, provision of protective gears to abattoir personnels and creating better design for community kraals in a manner that controls spread of bovine TB.

CHAPTER ONE: INTRODUCTION

1.0. Introduction

Presented in this chapter are the background, problem statement, objectives, significance, justification, research questions and scope

1.1.Background

Karamoja has been characterized by rampant cattle rustling and chronic insecurity (Eguru *et al.,* 2014). After the disarmament took place most pastoralists lacked the capacity to protect their livestock form raiders this prompted government to create protected kraals where several herds are confined in the evening under protection of Uganda Peoples Defense Forces (UPDF) and there were over 38 protected kraals existing in Karamoja by 2009 (UN OCHA, 2009)

The process of combining several herds in one kraal exposes animals to several risks one of which is Bovine TB as discussed by Humblet *et al.*, (2009) who said large herd size is major among several risk factors that enhances the spread of BTB, the more cattle there are on a farm, the greater the probability that one of them will acquire this infection thus increasing the risk of cattle-to-cattle spread

A study in 1998 by WHO in the report by Cosivi *et al.,* (1998) stated that 0f the 55 African countries by that time, 25 reported sporadic/ low occurrence of bovine TB; six reported enzootic disease; two, Malawi and Mali, were described as having a high occurrence; four did not report the disease; and the remaining 18 countries did not have data. Of all nations in Africa, only seven apply disease control measures as part of a test-and slaughter policy and consider bovine TB a notifiable disease; the remaining 48 control the disease inadequately or not at all this therefore shows that there is high risk of silent negative impacts of bovine tuberculosis whose study needs to be done but first the surveillance of the disease needs to be carried out in every part , this justifies why we need to start in Uganda to first begin from high risk areas like Karamoja

TB can be diagnosed clinically, but usually only in the later stages of the disease. Many cattle with bovine TB are clinically normal. Some cows with extensive miliary tuberculous lesions also appear clinically normal, therefore clinical manifestations can be best observed at post mortem (Ayele *et al.*, 2004).

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