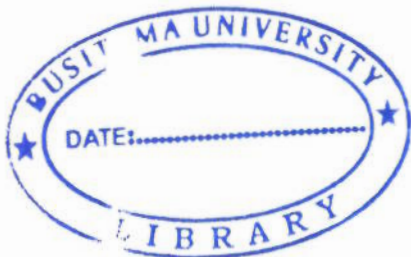

**THE IMPACT OF FOOT AND MOUTH DISEASE ON THE LIVELIHOOD OF
CATTLE FARMERS IN SOROTI COUNTY SOROTI DISTRICT**

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**A REPORT SUBMITTED TO THE FACULTY OF AGRICULTURE AND ANIMAL
SCIENCE IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD
OF THE DEGREE OF BACHELOR OF ANIMAL PRODUCTION AND
MANAGEMENT OF BUSITEMA UNIVERSITY**

JULY, 2015

DECLARATION

I, **Edwetu John Michael**, declare that this dissertation is an original and has never been submitted to any other University or any higher institution of learning for the award of degree.

Signature  Date 25.09.2015

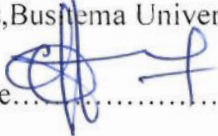
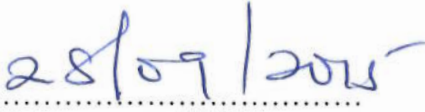


APPROVAL

This dissertation has been submitted for examination with the approval of the supervisor:

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Signature.......... Date..........

DEDICATION

This piece of work is dedicated to my family members, and to my parents.

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LIST OF ABBREVIATIONS

DVO	District Veterinary Officer
FAO	Food and Agricultural Organization
FMD	Foot and Mouth Disease
FMDV	Foot and Animal Disease Virus
MAAIF	Ministry of Agriculture Animal Industry And Fisheries
OIE	Office Internationale De Epizootics
SAT	South African Type
TAD	Trans-Boundary Animal Disease
USD	United States Dollar
WHO	World Health Organization
WRL	World Reference Laboratory

ABSTRACT

A study was conducted to assess the impacts of FMD outbreak on the livelihood of small holder cattle farmers in Soroti County, Soroti District. The objectives of the study were to determine the economic impacts of FMD outbreak to the livelihood of cattle farmers and to establish the social impacts of FMD on the livelihood of cattle farmers in Soroti County, Soroti District. The impacts of FMD were assessed based on data obtained from small holder cattle farmers that occurred in May, 2014 to December 2014. Data was collected using questionnaires administered to 150 small holder cattle farmers in the sub counties of ArapaiKatine, Asuret, Gweri, Tubur, Soroti and Kamuda. The results on mortality rates indicated that calves had the highest mortality rate of 37.8%, followed by cows (5.2%), Bulls (4.3%), steers (3.6%), and Heifers (1.8%). The total economic loss due to FMD outbreak in Soroti County was Ushs952,896. Mortality losses accounted for the highest economic loss of Ushs 435,000 per household followed by Draft power loss (Ushs 356,586). Vaccination costs, Treatment costs, Milk yield losses and abortion losses accounted for Shs 6,177, Shs74, 211, Shs 31,754 and Shs 49,237 respectively. Mortality losses ($\chi^2 = 45.635$), Treatment costs ($\chi^2 = 24.821$), Vaccination costs ($\chi^2 = 11.550$), Traction power losses ($\chi^2 = 22.368$) Milk yield losses ($\chi^2 = 12.661$) were statistically significant at 10% confidence level ($P < 0.1$). The social impacts were associated to reduction in meat and milk consumption, inability to use cattle for tradition practices like paying for bride price, giving cattle as gifts. The treatment costs were higher than vaccination costs. Mortality losses accounted for the highest economic losses. There was high mortality rate in calves as compare to bulls' cows' steers and heifers during the period of FMD outbreak..

CHAPTER ONE

INTRODUCTION

1.1 Background

Worldwide, FMD is the most important disease limiting the trade of animals and animal products throughout the world (Arzt *et al.*, 2011). The most direct economic impact of FMD in endemic countries is the reduced efficiency of production, thus lowering farmers' income. The impact of reduced productivity of animals can be prolonged as there is delay in reproduction leading to fewer offspring, resulting in a reduced livestock population. The impact of FMD has led to successful national and regional campaigns for disease eradication most notably in Europe and the Americas. It is estimated that annual impact of FMD in terms of production losses and vaccination alone are US\$5 billion (James & Rushton 2002). Much of the global FMD burden of production losses falls on the world's poorest communities (James and Rushton 2002).

In Africa, it has been estimated that more is spent controlling FMD than any other veterinary disease (Le Gall and Leboucq, 2004). A survey of African veterinary services found FMD to have the greatest impact on poverty of all the ruminant bacterial and viral diseases. Livestock keepers living in poverty are particularly vulnerable to FMD (Gall and Leboucq 2004). Furthermore, quality FMD vaccines are expensive, must be given repeatedly and kept refrigerated; this is not feasible for many livestock keepers. In Ethiopia there is no organized FMD control strategy except sporadic cattle herd vaccination usually after outbreaks. In the Borena region of Ethiopia, FMD is a disease that is left without intervention and has been occurring with increasing frequency (James and Rushton 2002).

Foot and mouth disease (FMD) is a highly contagious viral disease of cloven-hoofed animals and is one of the most economically important disease of livestock (Knight-Jones and Rushton, (2013). According to the office international epizooties (OIE), FMD ranks first among the notifiable infectious disease of animals (Law and Mol, (2011).

FMDV is of the genus *Aphthovirus* in the family Picornaviridae (Samuel and Knowles, 2001) and infection is through direct and indirect contact. There are seven major viral serotypes: O, A,

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