

PREVALENCE AND CAUSES OF KID MORTALITY IN ARAPAI SUB COUNTY, SOROTI DISTRICT

BY

TURYAGYENDA

BU/UG/2010/194



A DISSERTATION SUBMITTED TO THE FACULTY OF AGRICULTURE AND
ANIMAL SCIENCES FOR THE AWARD OF THE DEGREE OF BACHELORS
OF ANIMAL PRODUCTION AND MANAGEMENT OF
BUSITEMA UNIVERSITY

MAY 2013

DECLARATION

I, TURYAGYENDA, declare that this study is original and has not been submitted to any
other University or institution of learning for the award of any degree.
Sign: TADJui Date: 6/09/2013
This report has been submitted with the approval of the following person:
Dr. Mawadri Patrick
Teaching Assistant
Department of Animal Production and Management
Faculty of Agriculture and Animal Sciences
Busitema University
Signature Date $\frac{\partial 9}{\partial 9}/2013$
3
BUSITEMA UNIVERSITY LIBRARY
State of the state
CLASS NO. 1. STORY 882

Rights and permission

Copy right©

DEDICATION

This work is dedicated to my parents, and to the entire family of the late Mr. Ndyanabo Cleophas for their motivation, support and guidance throughout my academic pursuit. Also, dedicate this work to all my course mates of BAPM 2010 for their kindness and cooperation during the first year of study.

Also I am dedicating this work to all students offering agriculture at tertiary level upwards and to all those interested in changing the face of agriculture and improving rural livelihoods in Africa through reforms in the animal production and management sector not forgetting my fellow researchers who will be able to add to my findings.

ACKNOWLEDGMENT

I wish to express my deepest appreciation to my supervisor Dr. Mawadri Patrick for his continuous constructive guidance, suggestions, correction and encouragement and would like to thank the coordinator Mr. Mbogua Joseph and Dr. Emmanuel Walusimbi for the comments and suggestions of the topic for my dissertation.

I would like to express my sincere gratitude to the Dean and all members of the Department of Animal Production and Management Busitema University.

Finally, I would like to give special recognition to my Parents, and the family of Mr. Ndyanabo Cleophas.

TABLE OF CONTENTS

DECLARATIONi
DEDICATIONii
ACKNOWLEDGMENTiii
LIST OF FIGURESvii
LIST OF TABLESviii
LIST OF ABBREVIATIONS
ABSTRACTx
CHAPTER ONE: INTRODUCTION1
1,1 Back ground
1.2Problem Statement
1.3 Significance 2
1.4 Justification2
1.5 Main objective
1.6 Specific Objectives
1.7 Research Questions
1.8 Scope of the study
CHAPTER TWO: LITERATURE REVIEW4
Introduction4
2.2 Prevalence of kid mortality4
2.3 Care of a pregnant doe
2.4 Preparation for kidding/parturition
2.4 Neonatal care
2.6 Housing of kids
2.7 Feeding and watering of kids.

2.7.1 Feeding
2.7.2 Watering
2.8Weaning of kids10
2.9 Common causes of post natal kid deaths
2.9.1 Birth injury
2.9.2 Post natal malnutrition
2.9.3 Congenital defects
2.9.4 Primary Hypothermia 12
2.9.5 Secondary Hypothermia
2.9.6 Post natal infections
2.9.7 Accidents
2.9.8 Predation
2.10 Common kid diseases
2.10.1 Dietary/Nutritional Scours
2.10.2 Pneumonia
2.10.3 Coccidiosis
2.10.4 Navel ill/ Joint ill
2.10.5 Helminth parasites
CHAPTER THREE: MATERIALS AND METHODS
3.1 Study area
3.2 Study population
3.3 Study design
3.4 Disproportionate stratified sampling
3.5 Sample size determination
3.6 Data Collection

3.7 Data analysis	18
3.8 Ethical Consideration	19
3.9 Environmental Considerations:	19
4.0Anticipated Problems:	19
CHAPTER FOUR: RESULTS	20
5.0. Demographic characteristics of the goa owners	20
5.1. Sex of the goat owners.	20
5. 2Age of the goat owners.	20
5.3 Breeds of goats kept	21
5.4 Information on the goats owned, kids born, kids died according to age	22
5.6 Causes of kid mortality	24
5.7 Grazing space for the goats	24
5.8 Reasons for not having adequate space for the goats	25
5.9 Grazing system and type of housing	26
5.9.1 Grazing system of goats	26
5.9.2 Type of housing of goats	27
5.9.3 Other practices performed on goats	28
5.10 Personnel treating the goats and where farmers buy the drugs	26
CHAPTER FIVE: DISCUSSION	31
CHAPTER SIX: CONCLUSIONS AND RECCOMMENDATIONS	34
6.0 Conclusions	34
6.1 Recommendations	34
REFERENCES	35
Appendex A	38
Appendex B	42

LIST OF FIGURES

Figure 1: showing the sex of the respondents	20
Figure 2: showing the age of respondents	21
Figure 4: a bar graph showing the causes of kid mortality in Arapai sub county	24
Figure 5: farmers with adequate space for grazing their goats	25
Figure 6: showing reasons for not having adequate grazing space for their goats	26
Figure 7: showing the grazing system the goats in Arapai sub county	27
Figure 8: showing the type of housing in Arapai sub county	28
Figure 9: showing the personnel treating the goats and where farmers buy the drugs	29
Figure 10: showing the places where farmers buy drugs	30

LIST OF TABLES

Table	1:	Showing	the	goats	owned,	kids	born,	and	kids	died	according	to	age
		23											
Table :	2: T	he prevaler	ice of	the mo	rtality of	kids ii	а Агара	i Sub	Coun	tý	**************	******	23
Table .	3: Sl	howing oth	er pra	actices 1	performed	l on go	ats	,		*******	****************		28

LIST OF ABBREVIATIONS

NAADS National Advisory Agricultural Organization

NARO National Agricultural Research Organisation

ABD Average Body Weight

NUSAF Northern Uganda Security Action Fund

SPSS Statistical Package for Social Scientists

Dr Doctor

% Percentage

Mr Mister

< Less than

> Greater than

ABSTRACT

The study focused on kid mortality with a purpose of determining the prevalence and causes of kid mortality in Arapai Sub County. 4 Parishes were covered in the study that involved 55 goat farmers selected at random to whom questionnaires were administered by the author observation and inspection of the farm premises were also be done.

Data was entered and analyzed in Statistical Package for Social Scientists. Point prevalence by was calculated as the number kids that died within 6 months divided by the total number of individuals sampled and multiplied by 100. The study revealed the kid mortality rate and also observed the major causes of kid mortality and about 252 kids were considered.

The results revealed that the overall mortality rate is 38.1%. It was also observed that infectious causes were the major causes of kid mortality in Arapai Sub County.

The main infectious cause of mortality was pneumonia (33%). This study also revealed that 49% of the goat owners were aged between 31-50, 18-30 years (44%), >50 years (7%).

Small East African goats were mostly kept (70.9%), followed by 21.8% crosses, Mubende (1.8%), and Saanens 1.8%.

This study also contains conclusions where mojar attention should be on the facets of goat husbandry, which is crucial to the overall health of the herd. The farmer must be in tune with various factors that affect the health of the kids, nutritional and housing factors must be considered.

Finally, the study contains recommendations where maintenance of good health through application of appropriate disease control prevention by routine vaccination of vaccinatable diseases and regular tick control and deforming construction of proper and affordable kid houses coupled with maintenance of cleanliness in these structures to reduce on the hygiene related diseases.

CHAPTER ONE: INTRODUCTION

1.1 Back ground

Goats make up a great potential resource in Africa because they are more numerous than sheep, the majority of goats in the tropics are found in part-time, low output, scavenging systems, in herds of 5 to 10 animals. They are nevertheless very important as a source of meat and for religious purposes as well as savings. Savings mean that goats provide a way of generating capital and maintaining acceptable cash flow according to Fielding, (1987).

In Uganda, stakeholders like NARO and NAADS encourage most farmers especially those living in rural areas to engage in goat production mainly because they are very hardy in terms of diseases and drought tolerance. In the study conducted by Dönkin, (1998)., indigenous goats were shown to have genetic resistance to heart water, an important tick-born disease.

The advantages of farming with these adapted animals are tolerance to heat stress and water deprivation during drought periods as well as resistance to the many tropical diseases and parasites found in Africa (Maree and Casey, 1993, Ramsey et al., 1994). They are generally raised extensively on communal lands with minimal veterinary and other management inputs (Stewart, 1997).

However, the goat kids are more susceptible and perishable stage of a goat flock and any effort made to ensure their survival is bound to increase productivity and economic returns (Lebbie and Manzini, 1989). The death of kids before they are weaned is perhaps the single biggest cause of loss experienced by goat farmers. The predisposing factors may be a lack of colostrum at birth, poor mothering, poor nutrition of the dam leading to low milk production, dirty housing and pen areas which allow build up of infective agents, dirty water and failure to vaccinate the dam appropriately (Peacock, 1996).

High mortality among kids and slow growth among those that survive are the major constraints to production. Diseases, inadequate nutrition and poor management are the main underlying causes of the high mortality and low growth rates, especially among young animals (Lebbie and

REFERENCES

Ameh A. J. Egwu O. G. Tijjani N. A. (2000), Mortality in Sahelian goats in Nigeria. Preventive Veterinary Medicine, Vol.44, Issues 1-2, Pp. 107-111

Battaglia R.A. (2001) Hand book of Livestock Management, 3rd Edition, Prentice, Upper Saddle River, New Jersey, Pp. 416-472, 606.

Bitende S N, Njombe A, Semgalawe Z S. (2001), Women and food security reduction: A brief overview for Tanzania. In Tanzania Society of Animal Production Conference series, 28: 39 -60.

CMS/GAF Consult. (1999), Strategic study for the Development of Small Ruminants and Rabbits in Uganda. Field survey results and consultants calculations.

Devendra C, Mcleroy G.B. (1987), Goat and Sheep Production in the tropics. 2nd Edition, Longman Group U.K. Limited.

Devendra C. (1981), the goat in the humid tropics goat production Academic press, UK, Pp. 557-573.

Ekong E E. (1998), Rural Sociology Jumak publishers, Ibadan Nigeria p24.

French M. H. (1970), Observations on the goat FAO Publications, Rome 1970.

Hammond J, Bowman C.J, Robinson J. T. (1983), Hammond's Farm Animals, 5th Edition, Butler and Tanner Ltd, Pp. 110-145.

HoonaJ.J, Azuba R.M, Kanyike H, Mwebaze, S. (2005), Goat Production Manual. NAADS. Agriconsult Ltd and MAAIF, Pp 11-23, 40-53.

Kabagambee.K, Scholl D.T, Opuda-Asibo J, Miller, J.E. (2000), A Review of Goat Health and Management in Uganda with preliminary findings from the 1998 Goat Study. Uganda Veterinary Journal, Vol.6, No.1, May 2000, Pp 179-183.

Kamakune R. (2007), Effect of health and management on the reproductive performance of goats in Kamwenge sub-county and town council. A special project report submitted in partial fulfillment of the requirements for the award of the degree of Bachelor of Veterinary Medicine of Makerere University.

Kirumira F.D, Bareeba F.B, Kakusya G.R.E. (2000), Evaluation of Feed Resources and their effect on milk production of dairy goats under the intensive system in Kasese District. Uganda Veterinary Journal, Vol.6, No. 1, May 2000, Pp 25-32.

Kothari R.C. (1990), Research Methodology, Methods and Techniques. 2nd Edition, New Age International Publishers, Pp. 62-63, 104-105.

Kusiluka M. J. L, Kambarage M. D, Harrison S. J. L, Daborn J. C, Mathewman W. R. (1998), Causes of morbidity and mortality in Goats in Morogoro district, Tanzania: The influence of management. Small Ruminant Research; Vol. 29, Issue 2, Pp. 167-172.

Mackenzie D, Laing J. (1980), Goat Husbandry, 4th Edition, Faber and Faber London, Boston. Mathews G.J. (1999), Diseases of the Goat, 2nd Edition, ISBN: 0-632-05167, Blackwell Publishing, Iowa State University, Pp 58-61.

Mobini S. (1998), Health Herd Management Program for Goats. Georgia Goat Research and Extension Center. http://www.goatworld.com/articles/hhmpfg.shtml (4th March 2008).

Mugerwa S. (2003), Causes of calf mortality in Kyegonza Sub County. A special project report submitted in partial fulfillment of the requirements for the award of the degree of Bachelor of Veterinary Medicine of Makerere University.

Nsubuga D. (2002), Socio-Economic role and flock structure of goats in Siisa sub-county, Wakiso District, A special project report submitted in partial fulfillment of the requirements for the award of the degree of Bachelor of Veterinary Medicine of Makerere University.

OkelloL. K. (2000), Goat production in UgandaThe way forward. Uganda Veterinary Journal, Vol. 6, No. 1, May 2000, Pp 217-221.SS.

Okello K. L. (1983), A study of reproductive growth, mortality and browsing behaviour of Mubende goats under station management in central Uganda. In proceedings animal production, IFS Scientific workshop of East African grantees, April 19-22. Sheraton Kampala, Uganda, IFS Publication Sweden, Pp. 115-123.

Okellok. L. (1985), A survey of the productivity and functions of goats in Uganda; In Wilson R. T. and Bonrtzat D (ed), Small ruminants in African Agriculture ILCA: Addis Ababa, Ethiopia, Pp. 208-217.

OkelloL.K, ObwoloM.J. (1984), Review of the potentialities of goat production. World Animal Review, 5: 27-32.

Pagot J. (1992), Animal Production in the tropics and subtropics, Macmillan Education Ltd and CTA, Pp 428-435.

Payne A.J. (1990), An Introduction to animal husbandry in the tropics. 4th Edition, Longman scientific and Technical, Pp 525.

Radostits M. O. (2001), Herd Health, Food Animal Production Medicine, 3rd Edition, W.B. Saunders Company, Philadelphia, London, New York, St Louis, Sydney, Toronto, Pp 800-838.

Sewell M.M.H, Brockles by W.D. (1990), Handbook on Animal Diseases in the Tropics, 4th Edition, Bailliere Tindall, Pp 65-68, 312-315.

Siefert L, Opuda-Asibo J. (1994), Intensification of goat production in Uganda and Sewell M.M.H, Brocklesby W.D. (1990), Handbook on Animal Diseases in the Tropics, 4th Edition, BailliereTindall, Pp 65-68, 312-315.

Siefert L. and Opuda-Asibo J. (1994) Intensification of goat production in Uganda and associated health risk management. Proceedings of the second bi annual Conference on the African small ruminant research networks. AICC, Arusha, Tanzania, 7-11 December, 1994, Pp. 137-141.

Smith C.M, ShermanM.D. (1994), Goat Medicine, 1st Edition, Lea and Fabiger.

Steele M. (1996), The tropical Agriculturalist. Goats, Ist Edition, Macmillan with CTA, Pp. 3076.

Steele M. (1996), Improving goat production in the tropics: A manual for development works. An Oxfarm/ FARM- Africa, Publication.

Thrusfield M. (1995), Veterinary Epidemiology, 2nd Edition, Blackwell Science, Pp. 183.

Kosgey I.S, Rowlands G, van Arendonk J, Baker R. (2009), Small ruminant production in smallholder and pastoral/extensive farming systems in Kenya. Small Ruminant Research. 77(1): 11-24. Tanzania Society of Animal Production Conference series, 28: 39-60.