Impact of HIV/AIDS on the livestock-producing communities of Uganda: case studies of Moyo and Kashumba Subcounties

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APRIL 2008

DECLARATION

I declare that this piece of research work is my original work and it has not been published or submitted for any award to this university or any other institution before.

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DEDICATION

I dedicate this piece of work to my parents Mr. Martin Izama, (my father) Late Magdalene Via (my mother), Catherine Kinyaa (step mother), Sarah Tusiimire (my wife) and my daughter (Magdalene Anzoa).

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TABLE OF CONTENTS

	Declaration	i
	Dedication	ii
	Acknowledgement	iii
	Table of contents	iv
	List of table	vii
	List of figures	viii
	List of Acronyms and abbreviations	ix
	Abstract	xi
1.	**CHAPTER ONE: INTRODUCTION**	1
1.1	Background to the study	1
1.2	Statement of the problem	3
1.3	General objective	4
1.3.1	Specific objectives	4
1.4	Research questions	4
1.5	Scope of the study	5
1.6	Justification of the study	5
1.7	Definition of terms and concepts	5
1.8	Conceptual frame work	6
2.	**CHAPTER TWO: LITERATURE REVIEW**	8
2.1	The HIV/AIDS Pandemic	8
2.2	Strategies to mitigate the impact of HIV/AIDS on agricultural sector	11
3.	**CHAPTER THREE: METHODOLOGY**	13
3.1	Research design	13
3.2	Study areas	13
3.2.1	Moyo district	13
3.2.2	Isingiro district	13
3.3	Sampling strategies	14
3.4	Sample size determination	14
3.5	Data collection methods and instruments	16

3.5.1	Personal interviewing using a questionnaire	16
3.5.2	Observation	16
3.5.3	Participatory Rural Appraisal (PRA) methods	17
3.5.4	Documentary review (review of secondary data)	17
3.6	Data quality	17
3.7	Data analysis	18
3.7.1	Qualitative data	18
3.7.2	Quantitative data	18
3.8	Reliability and validity	18
3.9	Ethical consideration	19
4.	**CHAPTER FOUR: RESULTS**	18
4.1	Demographic and socio economic characteristics of the households	20
4.2	Illness and HIV/AIDS situation in the households	21
4.3	HIV/AIDS awareness in Moyo and Kashumba	22
4.4	HIV/AIDS support services among the study communities	23
4.5	Impact of HIV/AIDS on labour for livestock production	24
4.6	Impact of HIV/AIDS on decision making for livestock related activities	24
4.7	Impact of HIV/AIDS on grazing and watering time for livestock	24
4.8	Impact of HIV/AIDS on animal source foods	25
4.9	Livestock producing practices in Moyo and Kashumba sub counties	25
4.10	Coping strategies of Moyo and Kashumba households affected by HIV/AIDS	26
4.11	Role of livestock in mitigating the effects of HIV/AIDS	26
5.	**CHAPTER FIVE: DISCUSSION**	28
5.1	Impact of HIV/AIDS on household labour	28
5.2	Impact of HIV/AIDS on household decision making	28
5.3	Impact of HIV/AIDS on watering and grazing time	29
5.4	Impact of HIV/AIDS on animal source foods	30
5.5	Livestock-producing practices that might aggravate the effects of HIV/AIDS	31

5.6	Coping strategies of those affected by HIV/AIDS	31
6.	**CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS**	33
6.1	Conclusion	33
6.2	Recommendations	34
	REFERENCES	36
	APPENDICES	40

LIST OF TABLE

Table 1 Illness and and HIV/AIDS situation in the households 21

LIST OF FIGURES

Figure 1	Conceptual frame work for impact of HIV/AIDS on livestock producing communities in Uganda	7
Figure 2	Educational achievements of household members in Moyo and Kashumba sub counties	20
Figure 3	Main source of income of the household members in Moyo and Kashumba sub counties	21
Figure 4	Venn diagram for HIV/AIDS support services among the communities	23

LIST OF ACRONYMNS AND ABBREVIATIONS

'A-Level'	Advanced level of education
'O-Level'	Ordinary level of education
ADEO	Action for Development and Educational Organization
AIDS	Acquired immuno-deficiency syndrome
BVM	Bachelor of Veterinary Medicine
CBPP	Contagious bovine pleuropneumonia
CHAI	Community HIV/AIDS initiative
DRI	District response initiative
et al	and others
FAO	Food and Agricultural Organization
FMD	Foot and mouth disease
GDP	Gross domestic product
HIV	Human immuno-deficiency virus
ITK	Indigenous technical knowledge
Kg	Kilograms
Km^2	Square kilometer
MAAIF	The Ministry of Agriculture, Animal Industry and Fisheries
MACA	Multi-sectoral approach for the control of AIDS
MAK	Makerere University
MOH	Ministry of Health
MPHIL	Masters of Philosophy
MSC	Masters of Science
MURJ	Makerere University Research Journal
NAADS	National Agriculture Advisory Services
NCD	New castle disease
NEMA	National Environment Management Authority
NGOs	Non governmental organizations
No.	Number
PEAP	Poverty eradication action programme

PHD	Doctor of Philosophy
PMA	Plan for modernization of agriculture
PRA	Participatory rural appraisal
SPSS	The statistical package for social scientists
TASO	The AIDS Support Organization
UAC	Uganda AIDS Commission
UBOS	Uganda Bureau of Statistics
UJAS	Uganda Journal of Agricultural Sciences
UNAIDS	United Nations joint programme on acquired immuno-deficiency syndrome
UWESO	Uganda Women's Effort to Save Orphans
Vol	Volume
WFP	World Food Programme
YAASA	Youth anti HIV/AIDS association

ABSTRACT

This study on the impact of HIV/AIDS on the livestock-producing communities of Uganda was carried out in Kashumba and Moyo sub counties. Data were collected using semi-structured questionnaire administration, focus group discussion which was guided by use of focus group check list, and others were use of observation guides for social phenomena and review of secondary data. The main objective of this study was to determine the impact of HIV/AIDS on the livestock producing communities in Uganda.

The study showed that there was significant reduction in the availability of labour for grazing and watering for livestock in both Moyo (χ^2=5.200, p=0.023) and Kashumba (χ^2=13.958, p= 0.001); There was significant shift in decision making and implementation from household heads who have died to surviving household members as for livestock grazing and sale of livestock products, Moyo (p= 0.019), (p=0.017), Kashumba (p= 0.009) and (p=0.041). The study found out that there was significant reduction in grazing and watering time for livestock activities, Moyo (p=0.005), Kashumba (p=0.003). It was observed that Animal source foods generally reduced in the households affected by the HIV/AIDS epidemic. There was considerable loss of self sufficiency in food security.

The study documented livestock husbandry practices that could aggravate the effects of HIV/AIDS namely, rigours of grazing leading to exhaustion, spraying leading to inhalation of the acaricide fumes that are toxic to the body, and consumption of drug residues in livestock products leading to drug resistance against some of the common antibiotics like penicillins and tetracyclines.

The study also highlighted the role of livestock which included main source of income and employment. The study recommended that livestock sector should plan ahead and work towards AIDS–competent communities in Uganda. This will enhance community baseline assessment, community action strategies, and integrated plan for informing community timely and effectively. Social cohesion should be strengthened, nutritional education should be directed to vulnerable groups and masses extensively sensitized on drug withdrawal periods and labour saving practices.

CHAPTER ONE
INTRODUCTION

1.1. Background to the study

In Uganda the human immunodeficiency virus (HIV) / acquired immunodeficiency syndrome (AIDS) was first recognized in l982 as a fatal, disease of humans. This illness soon became popularly known as 'slim' Ministry of Health (MOH) and ORC Macro (2006). It devastated the continent of Africa, killing the youths and other sectors of the population in their prime, productive age when their families and countries most needed them (FAO, 2001)

Livestock play a vital role in the livelihoods of many rural communities, providing food, income and security. Draught animals also provide power for preparing land, and transporting goods and services. HIV/AIDS impacts negatively on livestock production systems through; animals are sold to raise cash to buy medicines, livestock are slaughtered during funerals, households may lack sufficient time to care for animals and market their products. Other related negative impacts include widows and orphans may not have the knowledge and skills to care for specific animals, loss of animals due to mortalities, reduced extension services and loss of animals reducing bio-diversity (FAO, 2001).

There are HIV/AIDS specific issues and gaps related to decision-making, grazing and watering time, animal-source foods and livestock-producing practices among livestock communities in the two rural areas of Moyo and Kashumba sub-counties purposively selected for further investigation.

Moyo district is located in West Nile region (north western Uganda). The river Nile forms its south-eastern border, Sudan its northern border, and Yumbe district its western border. The entire area lies between the latitudes of 3^{o} 30'N and 4^{o} N and the longitudes of 31^{o} 30' E. In total, the district covers 2057 km^2, of which 192 km^2 consists of rivers or

swamps and 172 km^2 of gazetted forests and game reserves (Moyo District Planning Unit 2002). Approximately 78.9% of the land area is arable or suitable for cattle grazing. (Moyo District, 2002).

The district has a population of 202,291 persons (174,307 indigenous, 27,984 refugees) giving a population density of 52 persons per km^2, compared to the national average of 85 (Moyo District Planning Unit, 2002). In Moyo sub-county alone there are 3,755 head of cattle owned by 899 households; 18,862 goats by 2,069 households; 1,106 sheep by 317 households and 4,014 pigs by 1,831 households (Moyo Livestock census, 2004). In total 5,116 households produce at least one type of livestock in Moyo sub-county (Moyo District, 2002). The activities of the households regarding livestock production include; grazing and watering animals, paddock and kraal making, treatment of animals and sale of animals etc. The HIV/AIDS prevalence in Moyo is estimated to be 5.0% (Moyo District Local Government Three year rolling Plan, 2004/2005-2006/2007).

On the other hand, Isingiro district in which Kashumba sub-county is found is located in south-western region (western Uganda). The District borders with the United Republic of Tanzania in the south, Mbarara district in the north, Rakai district in the East and Ntungamo district in the West. The area receives an average rainfall 1700mm per annum and has bimodal rain seasons from mid February to mid May then mid September to mid December. There are two dry seasons separating the rainy seasons, temperatures are an average of 25^oC in hilly areas but goes to up to 35^oC in low land areas. Vegetation ranges from grassland to shrubs and thickets. A number of hills are increasingly becoming bare due to overgrazing and indiscriminate bush burning. The nature of soils is mainly loam, clay and laterite soils (Isingiro District Local Government Profile Report, 2005).

Kashumba sub-county with a total human population of 19,431 (9,670 males and 9,761 females) at the 2002 census borders the United Republic of Tanzania, (Isingiro District Local Government Profile Report 2005). The sub-county is inhabited by the Bahima and Banyarwanda who are cattle producers and are the major contributors of revenue to

Kashumba sub-county. Other inhabitants are the Bakoki, Banyambo, Bakiga and Banyankore who are primarily cultivators although some produce a few livestock. The total number of households producing cattle, goats, pigs and poultry in the sub-county number to 5,123. The activities of the households regarding livestock production include; rearing and watering animals, paddock and kraal making, treatment of animals and trading of animals etc. The HIV/AIDS prevalence in the study area is about 6.9% compared to 6.4% of the National average (Kashumba sub-county Local Government Profile Report, 2005).

The theory used to explain, describe, understand and predict the impact of HIV/AIDS on the livestock-producing households of the communities of Uganda was adopted from the theory that was advanced by (Perry *et al., 2005*); Perry and others suggested the socioeconomic effects of human diseases on affected communities are loss of productivity, high treatment costs, reduction or elimination of market opportunities, disturbance of human health and impairment of human welfare reduction of man hours on farm work. This theory was a basis for guiding this particular research i.e. impact of HIV/AIDS on livestock producing communities in Uganda.

1.2. Statement of the problem

HIV/AIDS has continued to inflict untold suffering onto people worldwide. There are socio economic effects that are not related to medical specific concerns about the epidemic. As for the agricultural sector, research done on the impact of HIV/AIDS on communities mainly centred on crop- producing and fishing communities and other socio-economic issues. Available information on livestock- producing communities does not go in depth in addressing and quantifying specific issues related to labour for livestock production, decision-making as far as livestock activities are concerned, grazing and watering time, and availability of animal-source foods, livestock and coping strategies for households that were affected by the effects of HIV/AIDS. This research therefore attempts to fill information gaps about HIV/AIDS among a representative of livestock-producing communities in Uganda as far as labour for livestock production,

decision making, grazing and watering time, availability of animal source foods and coping strategies are concerned.

1.3. General Objective

The aim of this study was to determine the impact of HIV/AIDS on livestock-producing communities of Moyo and Kashumba sub-counties.

1.3.1. Specific Objectives

The specific objectives of the study were:

i. To establish the impact of HIV/AIDS on labour for livestock production.
ii. To investigate the impact of HIV/AIDS on decision-making for livestock production.
iii. To determine the impact of HIV/AIDS on grazing and watering time for livestock production.
iv. To establish the impact of HIV/AIDS on animal-source food security availability in variety and quantity.
v. To profile livestock-producing practices that might aggravate the effects of People who live with HIV/AIDS.
vi. To find out household coping strategies of those affected by HIV/AIDS.

1.4. Research Questions

(i) Is there any relationship between the prevalence of HIV/AIDS and food security?
(ii) Is there any relationship between the prevalence of HIV/AIDS and livestock production levels, social development? If so how do these come about?

1.5. Scope of the study

The study was carried out in Moyo sub-county, West Moyo county, Moyo district and Kashumba sub-county, Bukanga county, Isingiro district. The study covered a period of one year from June 2006 to June 2007. The study assessed the impact of HIV/AIDS on labour for livestock production, decision-making, grazing and watering time, animal-source foods. It profiled livestock producing practices that might aggravate the effects of HIV/AIDS and examined coping strategies of those affected by HIV/AIDS.

1.6. Justification of the study

The crisis of AIDS has global, regional, national as well as local dimensions. Information generated here will widen the horizon for multi-sectoral approach towards addressing the HIV/AIDS epidemic in addition to medical and social dimensions of HIV/AIDS. It can also be used for mainstreaming HIV/AIDS concerns in livestock sector. Available information on livestock production does not go in-depth in addressing and quantifying specific issues related to labour for livestock production, decision-making as far as livestock activities are concerned, grazing and watering time, and the different animal-source foods. The study selected Moyo and Kashumba sub-counties because of closeness in HIV/AIDS prevalence rates of 5% and 6.9% respectively and both communities are mixed livestock producing rural communities where research of this nature had not been conducted previously.

1.7. Definition of terms and concepts

Livestock-producing households: refers to households that produce cattle, goats, sheep, pigs and poultry. A household member spends at least 50% of his/her daily time caring for livestock that provides the main income and livelihood.

Livestock: in this study means domestic animals kept for food and income namely, cattle, goats, sheep, pigs, poultry, rabbits, guinea pigs etc.

Persons living with HIV/AIDS: means persons tested and confirmed to have contracted HIV.

Affected household: refers to households where at least one family member had been lost to HIV/AIDS or HIV/AIDS-related illness.

Non-affected household: refers to households in which no member has died of, or suffered from HIV/AIDS-related illness over the last five years.

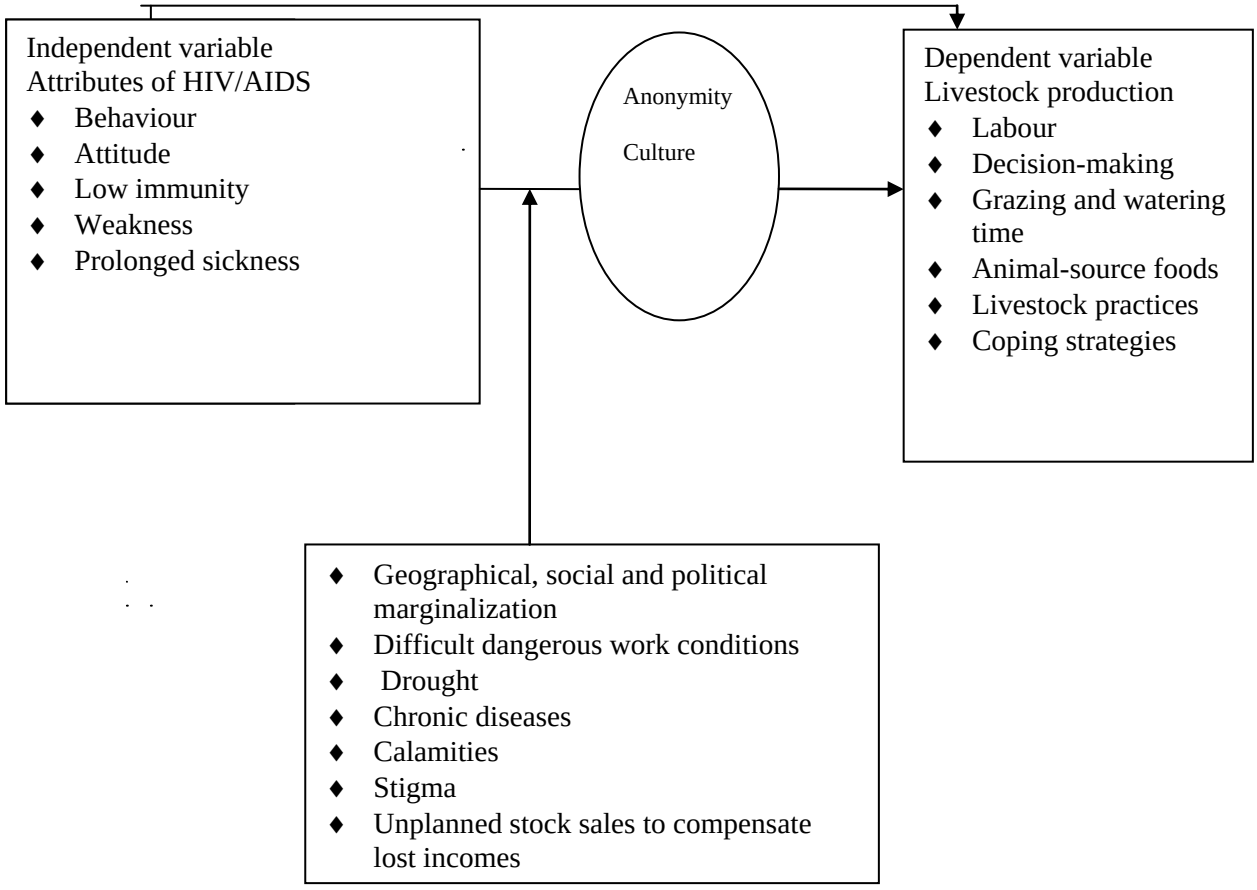
Rural livelihood strategies: strategies that enables individuals and households to provide for themselves.

Animal-source foods: include foods that are products of domestic animal origin and edible to human beings.

1.8. Conceptual Frame work

The conceptual framework for impact of HIV/AIDS on livestock-producing communities was shown as in Figure 1.

Figure 1. Impact of HIV/AIDS on livestock-producing communities



CHAPTER TWO
LITERATURE REVIEW

2.1. The HIV/AIDS Pandemic

The human immunodeficiency virus (HIV) / acquired immunodeficiency syndrome (AIDS) is a human tragedy of our times that has caused the most devastation in the history of human health. The disease continues to ravage families throughout the world (Coutinho, 2003, NEMA, 2002). By 2005, 25 million people world wide had died of AIDS, and at least 40 million people are now living with HIV. An estimated 4.9 million people were newly infected with HIV in 2005; over 75% are in sub-saharan Africa, (Lamptey *et al.*, 2006)

Sub-Saharan Africa has been adversely affected with 25.8 million people living with HIV including 3.2 million newly infected people in 2005. In 2005 AIDS accounted for 2.4 million deaths representing 7.2% of adults infected. The AIDS pandemic shows no sign of slowing despite concerted efforts to control it: the epidemic is surging up in Eastern Europe and Asia (Lamptey *et al*., 2006).

Various reports (Lamptey *et al*, 2006; MOH, 2004; TASO, 2006; Coutinho, 2003; NEMA, 2002; MOH and ORC Macro, 2006) indicate that the disease is spread through blood, semen, vaginal secretions, and breast milk. Other routes include transfusions of HIV-infected blood or blood products; tissue or organ transplants; use of contaminated needles, syringes, or other skin-piercing equipment; and mother to child transmission during pregnancy, birth, or breast feeding. Human immune deficiency virus is extremely fragile. It cannot survive long outside the body fluids or tissue, and is unable to penetrate unbroken skin (Coutinho, 2003).

Lamptey *et al*., (2006) reveals that HIV kills by weakening the body's immune system until it can no longer fight infections. Opportunistic infections are illnesses such as pneumonia, meningitis, cancers, tuberculosis (TB), or other parasitic, viral and fungal

infections that occur when the immune system has been weakened. Human immune deficiency virus generally progresses over a decade before developing into AIDS when symptoms become evident. Early HIV-related symptoms include chronic fatigue, diarrhoea, fever, weight loss, persistent cough, skin rashes, herpes and other oral infections, swelling of the lymph nodes, and memory loss or other mental changes. Acquired immune deficiency syndrome is almost always fatal with or without treatment, although a few individuals have survived untreated for up to 20 years. Current drug regimens such as highly active antiretroviral therapy (HAART) slow the virus replication in the body (Lamptey *et al*., 2006, MOH, 2004; TASO, 2006). Slower replication rates lessen the burden on the immune system, thereby reducing HIV-related illnesses and allowing patients to live longer, higher-quality lives. There is no cure for AIDS: the disease resurges when HAART is halted (Lamptey *et al*., 2006).

Since 1982 over 1 million people in Uganda have died from AIDS leaving an estimated 2 million orphans (Coutinho, 2003). As the infection spread and the government became more open about the problem, massive campaigns were undertaken to sensitize the population with the aim of changing their sexual behaviour country wide (UNDP, 2001). The result of these interventions was the decline of HIV/AIDS prevalence rates at antenatal clinics from 22% in 1992/93 to 6.5% by the year 2003 (Mugyenyi, 2002). During this period, every Ugandan had lost at least one close relative to HIV/AIDS (Coutinho, 2003).

The HIV/AIDS prevalence in Moyo is estimated to be 5.0% among adults age 15-49. The HIV prevalence among males and females within the age of 15-24 are 2.3 , 3.2 % respectively and those under five years of age has HIV/AIDS prevalence of less than 1% (Moyo District Local Government Three year rolling Plan, 2004/2005-2006/2007) while the HIV/AIDS prevalence of Kashumba sub-county is about 6.9% compared to 6.4% of the National average. The HIV/AIDS prevalence within the age of 15-49 is such that 7.6% of the women and about 5.9% men are positives (Kashumba sub-county Local Government Profile Report, 2005) , MOH and ORC Macro, (2006) .

Uganda's economy largely depends on agriculture that contributes over 40% of the gross domestic product (GDP) and provides livelihood to 88% of its population (MAAIF, 2000). Agriculture also provides raw materials for the agro-based industries, and accounts for 60% of Uganda's foreign exchange earnings (UBOS, 2001). In 2001 livestock contributions to the gross GDP and agricultural GDP were 9% and 17% respectively, but the figures in 2004 stood at 5% and 14.6% (UBOS, 2004).

HIV/AIDS had a negative impact on the performance of the livestock sector by reducing the agricultural contribution to the overall GDP (MAAIF, 2002; UBOS, 2001). HIV/AIDS contributes to human vulnerability to environmental change by influencing agriculture; first HIV/AIDS is a threat to sustainable agriculture and rural development through its systematic impact (FAO/UNAIDS, 1999). It has reduced life expectancy, exerted pressure on agriculture, education, health and other sectors thus slowing down the rate of development (MAAIF, 2002). It is expected that the agricultural work force in Uganda will have reduced by 14% by the year 2020 (FAO, 2001).

It is believed that HIV/AIDS has led to a number of changes at household and community levels. These vary according to the farming practices. In mixed farming communities the changes include area of land cropped, types of crops grown and farming practices used (MAAIF, 2000). In the fishing communities the changes include fishing practices, size of catch, support and labour, patterns of fishing activities (NAADS, 2003). Pastoral communities have experienced shift in number of livestock kept, access to grazing, livestock productivity, and labour requirements (MAAIF, 2002). HIV/AIDS care related expenses, reduced ability to work, mounting medical bills and funeral expenses collectively push affected families deeper into poverty.

2.2. Strategies to mitigate the impact of HIV/AIDS on agricultural sector

The Plan for Modernization of Agriculture (PMA) is one of the major strategies of the Uganda government to increase crop, livestock and fish production for food and self-sufficiency, and diversify agricultural exports and income. To mitigate the impact of HIV/AIDS on the agricultural workforce, treatment of infected individuals is a very important option so that they can remain productive longer. People need to utilize the voluntary counselling and testing facilities to know their status and make appropriate decisions for their lives and those of the family members. Uganda's strategy to reduce HIV/AIDS epidemic has been evolving since 1986 when the disease was first identified in the country. Initially the disease was viewed as a medical issue only, and interventions were localized in the Ministry of Health. However, by the early 1990s the impact of the disease was discovered to be multifaceted and so in 1992 government designed a multi-sectoral approach for the control of AIDS (MACA). This approach calls for the public and private sectors, individuals and communities to play their roles in the fight against the disease (UAC, 2002).

The Uganda AIDS Commission was established in 1992 to coordinate and operationalise a multi-sectoral response in the fight against HIV/AIDS (UAC, 2002). In addition, Uganda has since 2001 mainstreamed HIV/AIDS into the National Poverty Eradication Action Plan (PEAP). This plan requires that all development initiatives and efforts must be responsive to HIV/AIDS (PEAP, 2004). Government also developed a national strategic framework (2001/2 – 2005/6) to guide the implementation of policies, strategies and activities designed by the various players to address the epidemic. This framework focuses on three major goals of prevention, care and mitigation as well as capacity building (UAC, 2006).

The Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) response to the scourge is guided by the goal and objectives of the National Strategic Framework for HIV/AIDS and the mandate of the ministry. The agricultural sector response has the following objectives: develop policies that support and empower agricultural staff and

farming communities to reduce the spread of HIV/AIDS; strengthen the capacity of the ministry, sector agencies, district production departments to design, implement, monitor and evaluate HIV/AIDS related interventions; solicit and maintain support from leaders and policy makers for HIV/AIDS related activities and programs in the sector and promote availability of reproductive health services and HIV/AIDS counselling to agricultural staff and farming communities (PMA, 2000).

The communities roles mainly centred on fighting stigma and discrimination, supporting families affected with HIV/AIDS and encourage persons living with HIV/AIDS participate in community related activities. Individuals are supposed to be aware of causes of HIV/AIDS and comply with control and prevent measures that mitigate the spread of HIV/AIDS using ABC principle; abstinence, being faithful and using condom at all times during sexual intercourse (UAC, 2002)

CHAPTER THREE
METHODOLOGY

3.1. Research Design

The study was cross-sectional (data was gathered from a sample of population at a particular time) and it involved use of both qualitative and quantitative methods. Combination using both qualitative and quantitative approaches was essential to the research. The qualitative data explains and gains insight and understanding of phenomena through intensive collection of narrative data meanwhile quantitative data orients towards quantification and investigate relationships, including cause- and effect relationships. This study involved proposal development, sampling, data collection, analysis and reporting.

3.2. Study areas

The study was carried out in Moyo sub-county, West Moyo county, Moyo district and Kashumba sub-county, Bukanga county, Isingiro district.

3.2.1. Moyo district

Moyo district is composed of two counties namely West Moyo and Obongi. The study area covered Moyo sub-county in West Moyo county. Moyo sub-county is composed of five parishes (Aluru, Ebihwa, Vurra, Eria and Logoba), 26 villages, 6519 households and 31,767 persons (15,932 males and 15,835 females) (Moyo District, 2002).

3.2.2. Isingiro district

Isingiro district has two counties namely, Bukanga and Isingiro. Bukanga county has 5 sub-counties viz; Ngarama, Kashumba, Mbaare, Rugaaga, Endiizi. Isingiro county has 6

sub-counties viz; Masha, Birere, Kibingo, Nyakitunda, Kikagate, Kabuyanda and one town council namely Kabingo.

3.3. Sampling strategies

The study district, county and sub-county were purposively selected to reveal the required information according to the objectives of the study. The sampling frame constitutes all those households where at least one member spends 50% of the day to day activities on caring for livestock. All the five parishes in Moyo and three parishes in Kashumba were included in the study. The calculated sample was proportionately distributed among the parishes .The actual samples were then randomly selected from the sampling frame using the lottery selection procedure.

3.4. Sample size determination

The sample size was estimated by single proportion or mean.

Thus:

$$n = \frac{4pq}{e^2} = \frac{z^2pq}{e^2} = \frac{1.96^2pq}{e^2} = \frac{3.84 \times 0.5 \times 0.5}{0.1^2} = 96 \quad \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where n is sample size, where z is the z-value (standard normal tables) yielding the required degree of confidence; p is an estimate of the population; q is derived by subtracting p from 1, and e is the absolute size of the permissible error in estimating p.

There were 5,116 livestock-producing households in Moyo sub-county and 5123 in Kashumba sub-county.

The estimated sample was thus adjusted for the respective sub-counties as per the formula below;

$$\frac{N \times n}{N + n} \quad \ldots\ldots\ldots\ldots\ldots\ldots (2)$$

where n- adjusted sample and N= Total number of the Households

Moyo sub-county = $\frac{N \times n}{N + n} = \frac{5116 \times 96}{5116 + 96}$ = 94 Households

Kashumba sub-county = $\frac{N \times n}{N + n} = \frac{5123 \times 96}{5123 + 96}$ = 94 Households

Or, A 10% degree of error margin was used (Taylor-powell, 1998).

From $n = \frac{N}{1 + Ne^2}$ ……(3)

Ne-Level of precision = 0.1 and n-desired sample; N-Total Population

$n = \frac{5116}{1 + 5116 * 0.1^2}$ = 98 households for Moyo sub-county

$n = \frac{5123}{1 + 5123 * 0.1^2}$ = 98 households for Kashumba sub-county

n = has been approximated to 100 households each for Moyo and Kashumba sub-counties.

In Kashumba sub-county all the three parishes were sampled and the samples proportionately distributed according to the total number of households. The household's patterns were Kashumba (2613), Murema (1127) and Kigaragara (1383) in the parishes. The sample distributions were Kashumba (51), Murema (22) and Kigaragara (27) samples respectively.

Moyo sub-county had 6519 households of which 5116 were livestock-producing. The parishes in the sub-county and their household numbers were Aluru, (1430), Ebihwa, (655), Eria (456), Logoba (1633) and Vura (942). The proportional distribution of household samples among the parishes were Aluru, (28), Ebihwa, (13), Eria (9), Logoba (32) and Vura (18). The actual households interviewed in Kashumba and Moyo sub-counties were selected randomly using the lottery method from households that have lost someone in their immediate families e.g. spouses, brother, sister, uncle, aunt etc to HIV/AIDS, a member living in the household had been tested and found HIV positive etc. the use of community leaders and Persons living with HIV/AIDS leaders have been

essential in identifying the households required in this study and this made sampling of the households easy. In Moyo for example there is an association for persons living with HIV/AIDS who are enlightened and are more open about their HIV/AIDS status.

3.5. Data collection methods and instruments

Data was collected through triangulation of the various methods of data collection outlined below and the findings were used to address the specific objectives.

3.5.1. Personal interviewing using a questionnaire

A semi- structured questionnaire was administered to an adult member of the household available at that particular time of the data gathering process. The questionnaire was designed in such a way that respondent's views were captured as open ended (free answer) and closed, pre-coded, or fixed alternative questions. Only one member of the household was interviewed by reading and interpreting the questions in local languages and responses recorded by researchers in English. The questions were seeking information related to household demographic characteristics, HIV/AIDS situation in the household and its impact on the household and livestock production mainly and possible mitigation and coping measures adopted by households.

3.5.2. Observation

The presence of graves, ill health, signs of overgrazing due to limited time to graze animals far away and related coping survival activities at household levels were observed using observation checklist and information generated reduced, presented, cross tabulated and incorporated in the results for interpretation.

3.5.3. Participatory Rural Appraisal (PRA) methods

A focus group discussion checklist was used to facilitate the focus group discussions. The issues related to objectives of the study and the agreed issues were ranked and incorporated in the overall analysis of the study variables. The members of the focus groups were randomly selected from members of the households that had been interviewed most of them opinion leaders and some youths. The focus groups were divided into 8-10 members of same sex (females and males differently) so that they articulate their issues without gender bias. This ensured effective cooperation and revealing of information guided by requirements of the focus group check list facilitated by researchers.

3.5.4. Documentary review (review of secondary data)

The most important documents used here included public documents, namely livestock and population census statistics (04) from Moyo and Kashumba sub counties, statistical year books (01) from Uganda bureau of statistics, archival records (04) from the districts of Moyo and Isingiro and public libraries of the two districts. Others were personal documents, life histories (02), and administrative documents (04) and formal study reports from Non Governmental Organisations like the AIDS support organisation (TASO) from Isingiro and Youth anti AIDS support organisation (YAASA) from Moyo district.

3.6. Data quality

The data collected ensured relevance in the flow of information according to the objectives of the study like in order to achieve accurate, consistent and relevant data; the research assistants that conducted the personal interviews and facilitated the focus groups first underwent training in the appropriate skills. This training took three days at each study area and ensured that they conducted the interviews in a uniform and sensitive manner.

3.7. Data analysis

3.7.1. Qualitative data

Sarantakos, (1997) notes that data analysis in qualitative field research is an ongoing process. Observers formulate hypothesis and notes important themes throughout their study. As the research progresses some hypothesis were discarded, others are retained, whereas new ones are formulated. Data were collected, coded, conceptually organized, interrelated, evaluated and used as spring-board for further data collection until saturation had been achieved (Mugisha, 2005). This approach was adopted in this study to capture the qualitative variables related to the objectives of the study.

3.7.2. Quantitative data

All completed questionnaires were verified by cross checking them. They were then cleaned, edited and coded. Coded questionnaires were entered into the computer using the Statistical Package for the Social Scientists (SPSS 11.0) for analysis to establish if HIV/AIDS has impact on the study variables. Chi-square test and probability test was used to establish the degree of statistical significance of the impact of HIV/AIDS on labour for livestock production, decision-making, and grazing and watering time. The information generated here was integrated with those from the qualitative data and descriptive statistics was used to summarize the data using histograms and tabulations.

3.8. Reliability and validity

Reliability tests for some parameters were done using cronbach alpha reliability analysis. This is a model of internal consistency based on the average inter-item correlation. The following were the preliminary findings for Kashumba and Moyo respectively; HIV/AIDS awareness cronbach alpha (0.8646), (0.8747), grazing and watering time (0.7523), (0.8147), animal-source foods (0.8951), (0.7940) and decision-making (0.6107, (0.7052). The figures show that there is higher reliability among the tested parameters

and a bit low in decision-making in Kashumba. Questions related to decision-making hence forth had to be modified while collecting data from Moyo sub-county.

3.9. Ethical consideration

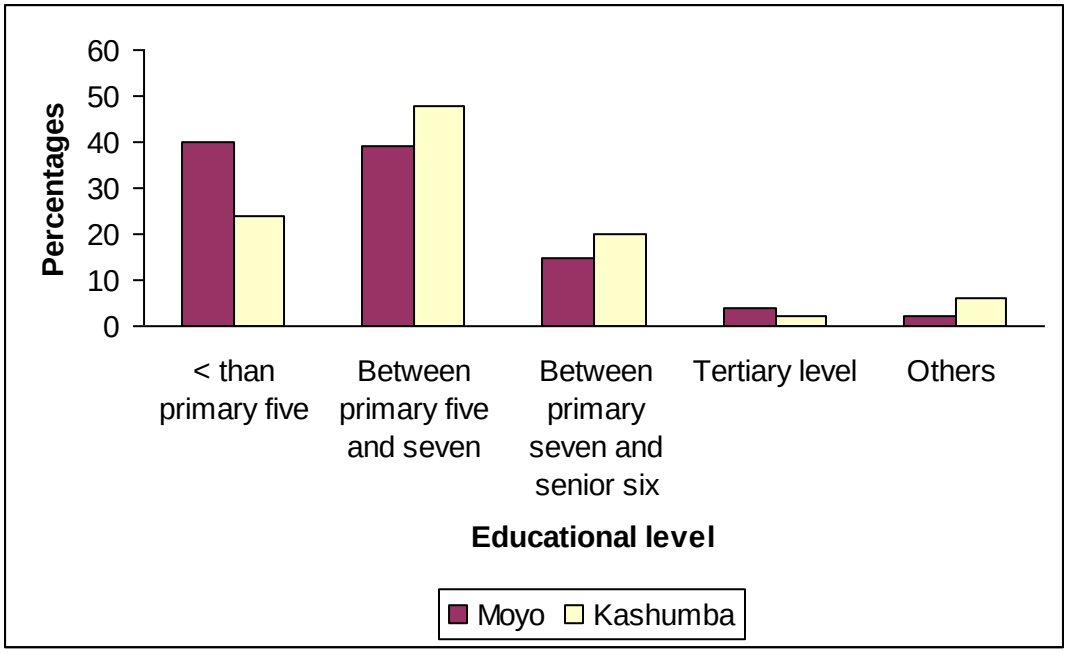
HIV/AIDS is a highly sensitive topic to study and therefore raises many ethical issues. Consent of people was first got through proper introduction of the research and its objectives, and the benefits that would accrue from it. The elders, household members, local council leaders and other stakeholders were briefed on the research process. Data on targeted individuals was kept private by the researcher including raw data thus making sure no one else had access to them by keeping them in a safe place. The confidence of the targeted people were sought and enhanced especially when it came to focus group discussions (FGD). Individuals were identified using number codes or names depending on how comfortable the respondent felt with it. The final research results will be made available to all interested parties - academics, households, policy makers and other stakeholders.

CHAPTER FOUR
RESULTS

4.1. Demographic and socio-economic characteristics of households

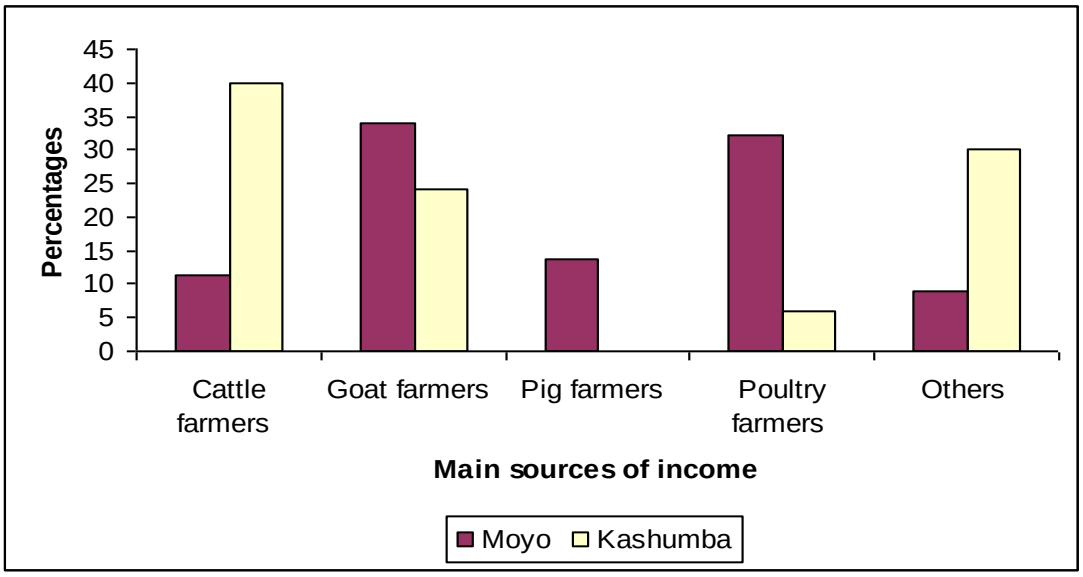
The socio-economic characteristics of the households were such that 92% (Moyo) and 88.9% (Kashumba) were married while 7% (Moyo) and 11.1% (Kashumba) were not married. The households were disaggregated into 79% (Moyo), 28% (Kashumba) had more than one spouse and about 21% (Moyo) and 56% (Kashumba) had only one spouse. The households had 39% and 48% of Moyo and Kashumba respectively attaining educational level between primary five and seven.

Figure 2. Educational achievements of household members in Moyo and Kashumba



Others = falls in categories whose educational background could not be established.

Figure 3. Main source of income of the household members in Moyo and Kashumba



On the other hand, the main sources of income of the households as represented by the respondents was livestock producing, followed by other activities such as crop farming (See Figure 3) above. The other kind of work the household members do to earn a living include retail trade, boda boda business, brewing, casual labour, sale of agricultural products, tomato growing, stone, sand, grass, charcoal selling and military service.

4.2. Illness and HIV/AIDS situation in the households

It was noted that 93% for Moyo and 88% for Kashumba of the households had had someone falling sick in the last one year. These sicknesses are included in Table 1 below;
Table 1: Illness and HIV/AIDS situation in the households

Types of sickness	Moyo sub county (%)	Kashumba sub county (%)
HIV/AIDS	48	43
Malaria	19	14
Other diseases	33	43

On the other hand, a total of (83%) Moyo and (75%) Kasumba of the households had lost a close relative in the last three years respectively. The close relatives lost were husband, wife, father, child, sister, brother, mother, both parents and others respectively. A total of 94 % (Moyo) and 82% (Kashumba) of the households indicated that they were aware of the existence of HIV/AIDS.

It was noted that AIDS is a big threat in these communities, 85 % of the respondents in Moyo and 66% in Kashumba indicated that the presence of HIV/AIDS in the households changed livestock practices in the past five years. The effect on the livestock producing household was reported to be: sick people becoming weak thus unable to do rigorous jobs, spending valuable time (in hospitals caring for the sick, caring for orphans, and attending funerals),mounting medical bills , selling animals to meet treatment costs, reduction in labour force leading to reduced animal production, thieves stealing animals because of lack of care by the owners who are bed ridden, increased risk of losing assets put up as collaterals for loans that cannot be repaid and high school dropout rates, as children abandon their studies in order to help ensure household income and supply.

4.3. HIV/AIDS awareness in Moyo and Kashumba

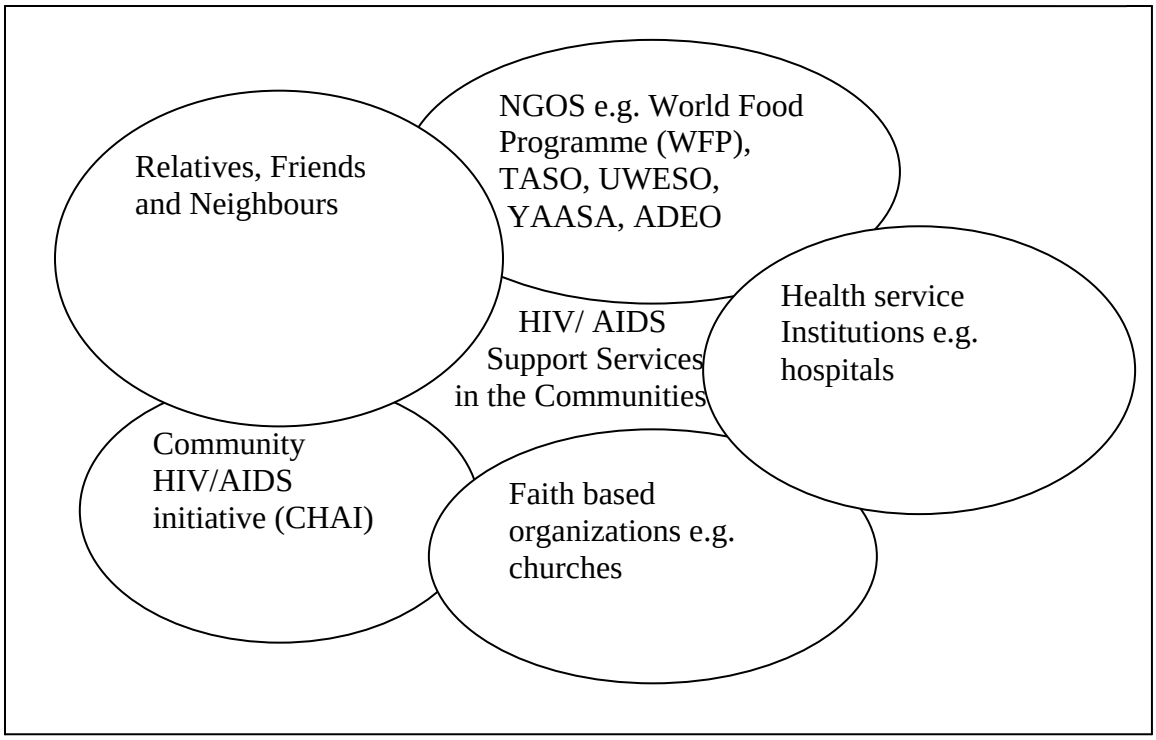
This section attempted to explain HIV/AIDS awareness in Moyo and Kashumba sub-counties. Households indicated unprotected sexual contact to be the main route of HIV/AIDS transmission. As for prevention, respondents listed, abstinence, condom use, being faithful, limiting number of sexual partners, avoiding injections, avoid kissing and treatment by traditional healers to be effective means. Respondents were of the concern where sharing the use of skin piercing instruments are involved. False tooth- extraction in babies was also noted to be highly dangerous as it could aid transmission of HIV infection. In Moyo sub-county however, village discos and dances, bars, alcoholism, video filming, were promotive ways of HIV/AIDS because they gather young people together and hence make them engage in risky sexual behaviours this is exacerbated by poverty among the young generation.

The source of information on AIDS was said to be through public campaigns, mass media e.g. radio, newspapers, and health education, counselling and testing, and training programs on HIV/AIDS.

4.4. HIV/AIDS support services among the study communities

A total of 88% (Moyo) and 82% (Kashumba) of the households indicated that they were aware of HIV/AIDS support services. Those reported to offer support services to the AIDS patients were as in the Venn diagram in Figure 4.

Figure 4. Venn diagram for HIV/AIDS support services among the communities



The assistance/support provided was in form of clothes, advice, drugs/medicine, food, and money, anti retro-virals (ARVS), guidance and counselling, transport services, prayers and care when on sick beds.

4.5. Impact of HIV/AIDS on labour for livestock production

This area addressed the impact of HIV/AIDS on labour for livestock production. The study found out that, there was a significant reduction in the availability of labour for grazing and watering of livestock as evidenced by Pearson Chi-Square Moyo (χ^2=5.200, p = 0.023), Kashumba (χ^2=13.958, p = 0.001) see details in the appendix (A.vi) page 47. The following were labour activities involved in livestock production: goat rearing, cattle grazing, watering of the animals, paddocking, kraal rearing, milking, treatment of animals etc. Households committed between 2 to 8 hours daily to caring for their animals depending on the species (Chicken, goats and cattle). Eighty (80%) of the households said labour for livestock grazing and watering reduced in households that were affected by the effects of HIV/AIDS. The labour activities in Moyo and Kashumba were the same.

4.6. Impact of HIV/AIDS on decision-making for livestock related activities

The study looked into the impact of HIV/AIDS on decision-making for livestock related activities. It was found out that there was significant change in decision making and implementation for livestock grazing and sale of livestock products as illustrated by significance of (p=0.019) for decision making and (p=0.017) for decision implementation for Moyo and (p=0.009) and (p=0.041) for Kashumba respectively in households affected by HIV/AIDS (see more details in the appendix (A.vi) page 48). Other activities for which decision-making was important included; making ghee (woman), selling milk (man), slaughtering a goat (consensus), taking care of the animals by neighbour (consensus), and gift to a friend (consensus).

4.7. Impact of HIV/AIDS on grazing and watering time for livestock

This sub section looked into the impact of HIV/AIDS on grazing and watering time for livestock. There was a significant reduction on the hours spent on grazing and watering before and after the households were affected by HIV/AIDS as evidenced by significance for Moyo (p=0.005), Kashumba (p=0.003) see details in the appendix (A.vi) page 50 .The

household members spent on average about 8 hours to graze their cattle and goats and little time to take care of their poultry because poultry is mainly kept on free range system. There is 2-4 hours daily loss if a household had a sick person in the hospital or at home due to HIV/AIDS. A total of about 65% of Moyo and 62% of Kashumba households confirmed that their grazing and watering time were affected following the presence of HIV/AIDS in their homes. The livestock mainly access drinking water from rivers Ebihwa and Kagyera for Moyo and Kashumba respectively.

4.8. Impact of HIV/AIDS on animal-source foods

The study found out that generally, household's animal-source foods in Moyo and Kashumba reduced. About 87.5% (Moyo) and about 58% (Kashumba) of the households had a indicated that HIV/AIDS had direct effects on animal-source foods sources. The products include milk, ghee (for Kashumba only), meat, pork, chicken, eggs and goat's meat. The impact ranged from reduction in quantity and quality consumed to absolute lack of these products and household insufficiency. It was reported by 47% (Moyo) and 65% (Kashumba) that livestock epidemic had hit the sub-county in the last five years and these included foot and mouth diseases (FMD), nagana, contagious bovine pleuripneumonia (CBPP). The livestock epidemic diseases mainly affected cattle yet animal source foods reduced drastically in households affected by HIV/AIDS.

4.9. Livestock-producing practices in Moyo and Kashumba sub-counties

The livestock-producing practices aggravating the effects of HIV/AIDS on households were reported to be: the rigour of grazing leading to exhaustion, spraying which may lead to inhaling of toxic fumes of acaricides, consumption of livestock products with drug residues which may lead to drug resistance in AIDS patients, high energy demanding livestock related activities such as cattle restraint during dehorning, castration)
These activities aggravates the effects of HIV/AIDS more so on persons living with HIV/AIDS compared to effects on normal population because of their vulnerability.

In Moyo and Kashumba sub-counties 69% and 52% of the households respectively have knowledge on livestock related activities compared to 31% of the households that seek help from veterinary personnel.

4.10. Coping strategies of Moyo and Kashumba households affected by HIV/AIDS

This subsection looked at coping strategies of Moyo and Kashumba households and categorised them into individual, household, community and income generating activities. The coping strategies households had adopted following the devastation of HIV/AIDS at individual level were; reduced working hours, feeding well (good nutrition), abstinence from sex at early age until properly married, sleeping under insecticide treated mosquito nets, and seeking for early treatment.

The household level strategies include; seeking for support, joined national Social security fund, households selling their own property, teach one another about the HIV/AIDS and showing love to affected persons. At community level; orphans were taken up by certain organization, advice to the young ones, bringing up children with God fearing heart, use of other workers. Additionally, paying visit to the concerned households for care and advice, avoiding adultery and forming post test clubs. The alternative income generating activities (IGAs) included borrowing money from money lending organizations, engaging in small retail business, growing vegetables, fruits, hand crafts making and rearing poultry . These strategies apply for both Moyo and Kashumba sub-counties.

4.11. Role of livestock in mitigating the effects of HIV/AIDS

This area aimed to address the roles of livestock in mitigating the effects of HIV/AIDS on the households. It was found out that 100% households in Moyo and 65% in Kashumba indicated that livestock contributed to household well-being as a main source of income, and source of food (milk, meat, ghee, butter, chicken, goat meat, cheese etc). Therefore, livestock is an essential tool for mitigating the effects of HIV/AIDS on the

household through provision of income for medical care and as a source of nutrition. In households affected by HIV/AIDS eggs and milk plays an important nutritional role in mitigating protein related deficiencies.

CHAPTER FIVE
DISCUSSION

5.1. Impact of HIV/AIDS on Household Labour

The study found out that there was significant reduction on labour for grazing and watering animals yet labour is a key factor in livestock development. Many technologies developed for improving livestock feeding and other husbandry practices are more labour-intensive a case agreed by (Kitalyi *et al.*, 2005).

The reduction in labour as noticed by the research findings has led to sale of animals, livestock would not be grazed and watered on time , decline and death of livestock, loss of income, and loss of skilled labour, reduced labour force, loss of livestock-producing advice and loss of Indigenous technical knowledge (ITK). NAADS, (2003) agrees with these findings where they had found it hard to quantify the effects of knowledge loss due to HIV/AIDS. However there appears to be less utilization of indigenous traditional knowledge and more reliance on "modern methods". There was irregular, reduced or non attendance at agricultural seminars leading to reduced access to disseminated extension messages and less utilization of improved husbandry practices leading to lowered livestock productivity; this has negative consequences in terms of livelihood to resource poor persons yet labour is a factor of production.

5.2. Impact of HIV/AIDS on Household Decision-making

The study documented that there were significant reduction in decision making and implementation among farmers in Moyo and Kashumba. The activities for which decision taking were sought include communal grazing and watering of animals, others include; spraying/ dipping, deworming, milking, kraal making, paddocking, calf rearing, dung collection, digging wells. UBOS, (2006) documented that women contribute a lot to household production. However, decision-making at household level is in many cases a

man's preserve particularly in the male dominated society an issue agreed by (Kitalyi *et al.*, 2005).

Decision-making is important in livestock development and economy because lack of timely decision-making leads to delayed husbandry practice affecting livestock farmers in Moyo and Kashumba leading to lowered production and mortalities in livestock; this has direct implications on the livelihood of the households. This is even made worse by the vulnerability caused by the presence of HIV/AIDS in these households whereby decision-making has shifted to other members of the households ($p=0.019$ for decision making and $p=0.017$ for decision implementation for Moyo and $p=0.009$ for decision making and $p=0.041$ for decision implementation for Kashumba. Yet knowledge and information exists within people who are exposed to it through observations, talking with other farmers, listening to the radio, attending seminars or training activities, or other resources as agreed by (Garforth *et al*., 2005). Decision making is a managerial function even at the family and household level.

Improving the access of households to information and greater participation in the creation of knowledge can make an important contribution to their empowerment. For this to happen, research systems, extension and advisory services and individual professionals must change the approaches in which they interact with livestock producers especially those affected by HIV/AIDS because of their vulnerability.

5.3. Impact of HIV/AIDS on Watering and Grazing time

This section attempts to discuss the impact of HIV/AIDS on watering and grazing time for livestock. The study found that there was a significant reduction on the hours spent on grazing and watering before and after the households were affected by HIV/AIDS as evidenced by significance for Moyo ($p=0.005$), Kashumba ($p=0.003$) There is little time allocated for grazing and watering of animals, hence there is increased tendency by animal owners to utilize nearby grazing areas and water points. This puts pressure on the nearby watering points that are foci of pasture degradation. The limited time for access of

watering points and grazing time leads to poor nutritional status, leading to reduced production and productivity for the herds at household level, a case observed by (Kajura, 2001). National Agricultural Advisory Services (NAADS, 2003) documented that affected men with HIV/AIDS who fell sick spend less time grazing and watering their animals. NAADS (2003) found in households around the Lake Victoria Crescent agro-ecological zone that women hire labour mainly to dig wells for watering animals, but to do so they had to sell some animals; they also sell cattle to buy grazing and watering rights from neighbours, this kind of scenario is very rare in Moyo and Kashumba Sub-counties. Wheeler (1996), observed that an adult milking cow eats about 3.4-3.7% of her body weight in dry matter daily and maximum dry matter intake (DMI) depends on continuous access to fresh, clean cool water. Water should be provided in a well lit area within 15 metres of the feed bank. This situation of desired production levels gets complicated with members of households being affected by HIV/AIDS. The overall effect is lowered production in livestock with dare consequences on income sources and livelihood.

5.4. Impact of HIV/AIDS on animal-source foods

This subsection looked into the impact of HIV/AIDS on animal-source foods. The study found out that generally, household's animal-source foods in Moyo and Kashumba had reduced. The products include milk, ghee (for Kashumba only), meat, pork, chicken, eggs and goat's meat. The impact ranged from reduction in quantity and quality consumed to absolute lack of these products and household insufficiency.

Food and Agricultural Organization (FAO, 2001) recommended that an individual person should drink about 200 liters of milk/ year and eat 50 kg of meat per year. This fell too short as compared to about 40 liters of milk/ year and about 2 kg of meat / per year for an average Ugandan (UBOS, 2001).

This study agrees with the findings of (NAADS, 2003) where they found out that; households had lost self-sufficiency in food, and the situation worsened in households

that fostered orphans or where the bread winner died. This particular study has documented the different animal-source foods consumed by these households.

The consumption of meat and meat products can clearly help alleviate some common nutritional deficiencies (Blender, 1992 as cited in Wilson *et al.*, 2005). Most national dietary guidelines recommend a reduction in cholesterol intake, with maximum ingestion of 300mg per day (Pearson and Dutson, 1990 as cited in Wilson *et al*., 2005). The impact of HIV/AIDS on household's members in Moyo and Kashumba limits the availability of these animal-source foods in right quantity, quality, time and access as shown by the results.

5.5. Livestock-producing practices that might aggravate the effects of HIV/AIDS

This study addressed the livestock-producing practices that might aggravate the effects of HIV/AIDS. The study documented the rigour of grazing leading to exhaustion, spraying which may lead to inhaling of toxic fumes of acaricides, consumption of livestock products with drug residues which may lead to drug resistance in AIDS patients and high energy demanding livestock related activities such as cattle restraint during dehorning and castration. This study concurs with Wilson *et al*., (2005) where he observed that livestock practices such as spraying may lead to inhalation of toxic fumes of acaricides, and consumption of livestock products with drug residues may lead to drug resistance in AIDS patients.

5.6. Coping strategies of those affected by HIV/AIDS

The coping strategies households had adopted to keep alive were categorised into individual, household, community and income generating groups. The households responded differently to effects exerted on them as a result of HIV/AIDS. UBOS, 2006 documents use of savings, reduction in consumption and informal borrowing. NAADS (2003) documents some of the labour-related, income and expenditure –related, nutrition and food –related coping strategies including community responses a case agreed by (Haslwimmer,1994).

The coping strategies are spontaneous responses by the households to mitigate the effects of HIV/AIDS so that survival is prolonged for sometime. This study found out and documented coping strategies related to livestock and other survival means including the role of indigenous technical knowledge in husbandry practices.

CHAPTER SIX
CONCLUSION AND RECOMMENDATIONS

6.1. Conclusion

1. HIV/AIDS is a human tragedy around the world, especially in resource-poor areas of Moyo and Kashumba sub-counties. Despite concerted efforts to curb the epidemic, and many success stories, HIV continues its relentless march. Given the fact that HIV/AIDS is depriving the communities of valuable labour to engage in active livestock production, this has impacted negatively on household income, animal-source foods, decision-making, grazing and watering time for livestock and overall lowered production, with food deficiency for household consumption The sale of assets to meet treatment costs is precipitating the cycle of poverty, and has various effects on how households can cope with the epidemic.
2. The break down in community responses such as fostering orphans, social capital and community buffering networks has complicated the situation further. The need to move away from subsistence- oriented (low-input, low -output) to commercially oriented production has been complicated by the effects of HIV/AIDS where recommended husbandry practices could not be adopted since poverty and illness such as HIV/AIDS and death are preventing farmers from adopting accepted husbandry practices. This problem is compounded by the loss of knowledge about modern and traditional techniques as knowledgeable members die off. Mechanisms that help the transfer of knowledge from one generation to the next should be encouraged and developed for sustained use. The noticeable changes in decision-making and implementation among households has most times led to livestock related activities being done poorly, inappropriately and insufficiently by surviving family members impacting negatively on production.
3. The adoption of management strategies that save on labour requirements such as paddocking, the use of fodder, inter cropping and minimum tillage helps households to cope with increased work loads from having fewer hands on the

farm. The fostering of orphans, reduced production, larger household sizes appears to be constraining most household's ability to meet their own food requirements. This is compounded by the loss of traditional food safety nets, and increased expenditure on drugs and other medical bills.

4. The aspects of livestock practices that mitigate the impact of HIV/AIDS among households have been clearly documented to be passed on to communities by extension staff through awareness seminars to understand their effects on affected persons living with HIV/AIDS. The various coping strategies namely; individual, household, community and income generating activities (IGAs) have been documented to establish their suitability and sustainability for the affected households.

6.2. Recommendations

1. Agriculture sector and livestock sector in particular should plan ahead and work towards AIDS –competent communities in Uganda. This would enhance community baseline assessment, community action strategies, and integrated participatory plan for informing community timely and effectively.

2. There is need to strengthen group formation and community support systems that address labour shortages, by pooling of available labour resources, so that gaps in knowledge and skills and identification of foster homes can be filled.

3. Nutritional education directed to vulnerable groups; women, orphans, and households affected by HIV/AIDS together with use of high- yielding varieties, better management practices, use of small ruminants, chicken for consumption, sale of manure, improving local pastures are possible strategies to improve nutrition among affected households.

4. Agricultural institutions should mainstream HIV/AIDS into all their activities and have periodic reviews of HIV/AIDS policies and guidelines so as to address its implication on the agricultural sector.

5. The private sector and other targeted research organizations should tailor research recommendations widely to address small holder farmers and rural communities specific HIV/AIDS related needs.

6. There is need to sensitize masses extensively about the need to follow withdrawal periods of drugs administered in management of disease conditions in livestock.

7. Extension agents and other private service providers should step up emphasis on the use of protective gears as farmers spray their livestock using acaricides.

8. Encourage less labour intensive livestock, switch from cows to goats and poultry and where possible tether or fence livestock to save time for herding and integrate fodder production with crops, on farm conservation or agro forestry.

9. There is need to fill information gaps related to; effects of other major livestock diseases and its impact to animal- source foods among households; investigate drug residual effects into animal-source foods in the two study areas and evaluate the role of indigenous technical knowledge (ITK) and other cultural practices in promoting livestock production including disaggregated gender profiles as far as HIV/AIDS impact on households is concerned.

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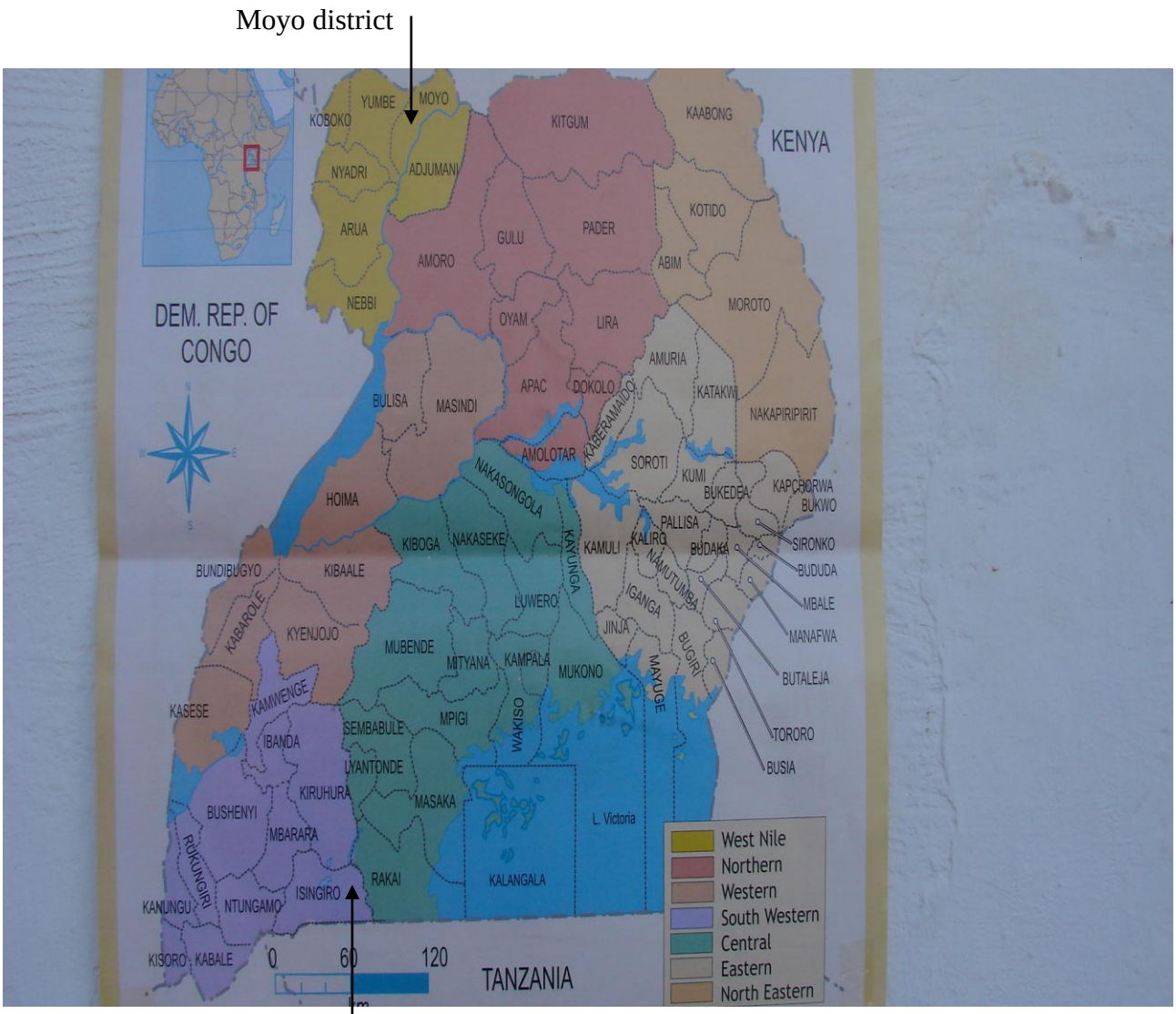
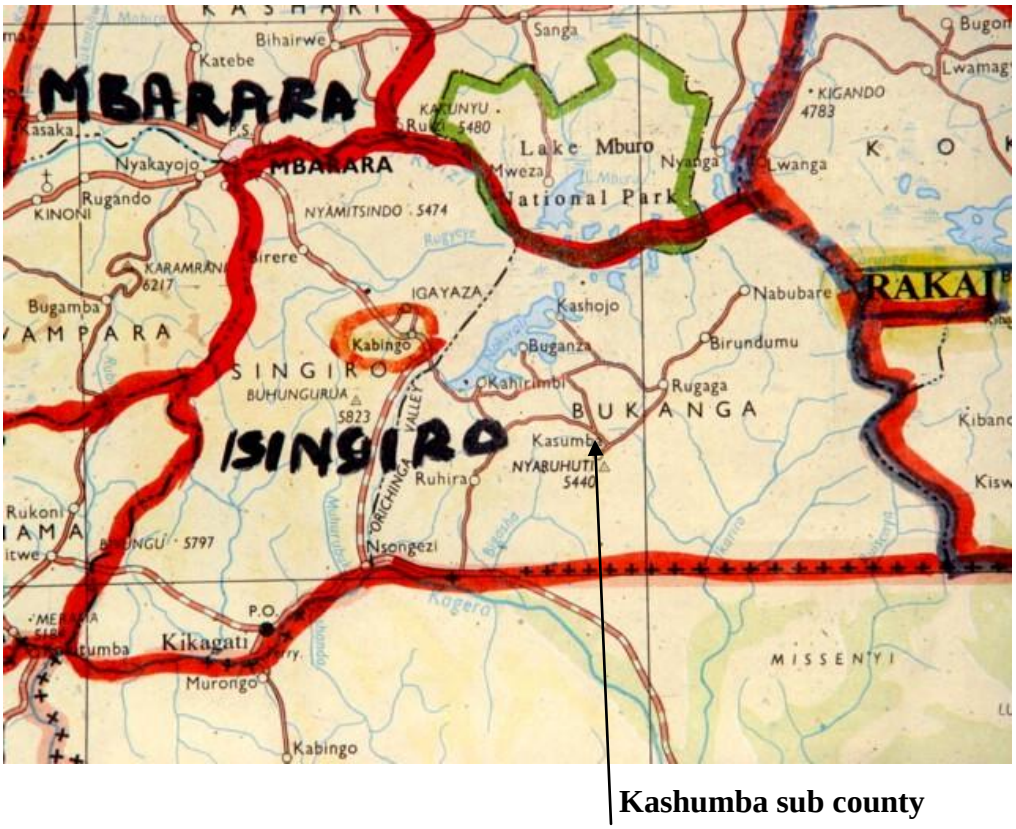
APPENDICES

Appendix A i: Map of Uganda Showing Isingiro and Moyo Districts

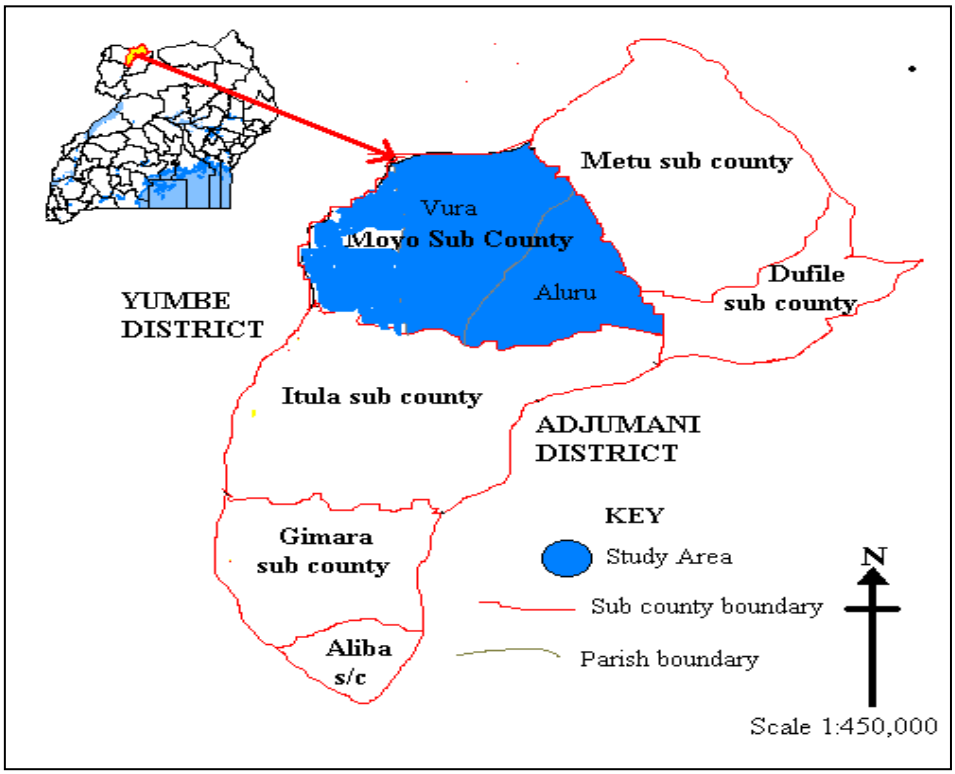


Appendix A ii: Map of Isingiro District showing the Study site Kashumba Sub-county



Kashumba sub county

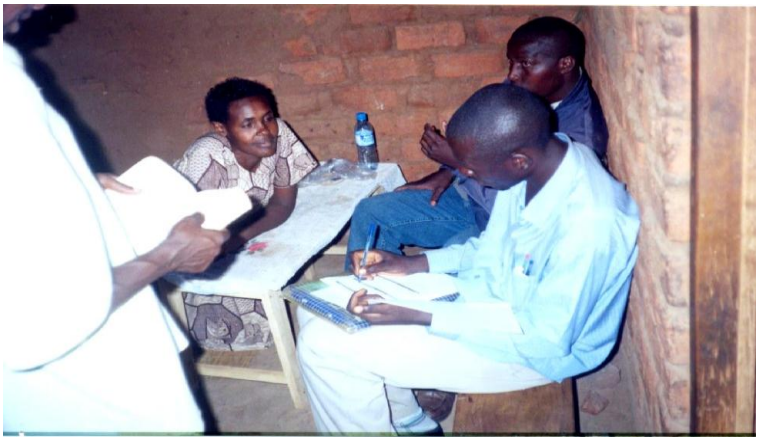
Appendix A iii: Map of Moyo district showing Moyo sub-county



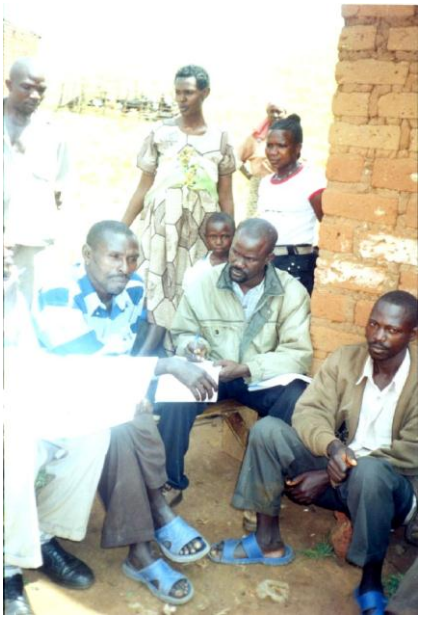
Appendix A iv: PICTORIALS FOR KASHUMBA SUBCOUNTY

Active focus group discussions at Kigaragara Parish trading centre by the participants on 3/3/2007

Focus group discussion at Kigaragara parish on 3/3/2007



An interview process at Murema Parish on 4/3/2007

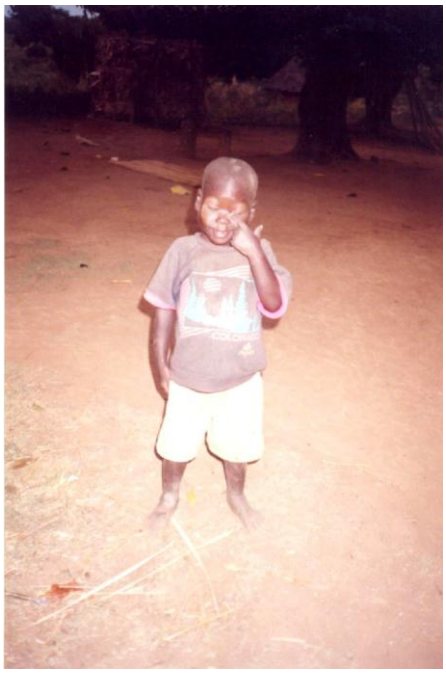


Researcher interacting with some key informants at Murema Parish on 4/3/2007

Spraying of cattle using acaricides to control ticks and other ectoparasites- Kigaragara Parish **(**NB**:** Use of protectives during spraying is important.) on 4/3/2007

Animal owner with Ankole cattle from Kigaragara Parish on 4/3/2007

Appendix A v: MOYO SUBCOUNTY PICTORIALS



An orphan who had lost both of the parents to HIV/AIDS under the care of grand Mother- Moyo sub-county on 10/4/2007

Researcher interacting with some of the households at Moyo people's hall on 14/4/2007

Pictorial of households and key informants at Moyo sub-county on 14/4/2007

Focus group discussion at Logoba health centre III- Moyo sub-county on 19/4/2007

Focus group discussion at Logoba health centre III- Moyo sub-county on 19/4/2007

Some of the key informants at Logoba Parish Moyo sub-county on 20/4/2007

Appendix A vi: Statistical analysis of study variables

Labour for livestock production Kashumba Sub County

Cross tabs

Has the labour for livestock production been affected by members of household suffering from HIV/AIDS? has the presence of HIV/AIDS in the household changed livestock practices over the 5 years Kashumba Sub County?
Cross tabulation

		Q27 has the presence of HIV/AIDS in the household changed livestock practices over the 5 years?		
		Yes	No	Total
Has the labour for livestock production been affected by members of household suffering from HIV/AIDS?	Yes count % within has labour for livestock production been affected by members of household suffering from HIV/AIDS	52 88.1 %	7 11.9 %	59 100.0 %
	No count % within has labour for livestock production been affected by members of household suffering from HIV/AIDS	5 41.7%	7 58.3%	12 100.0 %
Total	Count % within has labour for livestock production been affected by members of household suffering from HIV/AIDS	57 80.3 %	14 19.7 %	71 100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.958	2	.001
N of Valid Cases	71		

Labour for livestock production Moyo Sub County

Cross tabs for labour for livestock production Moyo Sub County

Has the labour for livestock production been affected by members of household suffering from HIV/AIDS * q27) Has the presence of HIV/AIDS in the household changed livestock practices over the 5 years? Crosstabulation

			Has presence of HIV/AIDS in the household changed livestock practices over the last 5 years		
			Yes	No	Total
Has the labour for livestock production been affected by members of household suffering from HIV/AIDS	Yes	Count	36	5	41
		%	87.8%	12.2%	100.0%
	No	Count	5	4	9
		%	55.6%	44.4%	100.0%
Total		Count	41	9	50
		%	82.0%	18.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.200	1	.023
N of Valid Cases	50		

Decision Making in Livestock related activities Kashumba Sub County

T-test for decision making in livestock related households Kashumba Sub County.

T-Test

Group Statistics

	q27) Has the presence of HIV/AIDS in the	N	Mean	Std. Deviation	Std. Error Mean
q351.0) Who makes decision in this household	Yes	61	1.7869	1.30531	.16713
	No	13	1.2308	.43853	.12163
q351.1) Who implements this decision	Yes	59	2.6271	1.57456	.20499
	No	12	2.0000	.73855	.21320

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
q351.0) Who makes decision in this household	Equal variances assumed	5.862	.018	1.511	72	.135	.5561	.36809	-.17765	1.28988
	Equal variances not assumed			2.690	58.433	.009	.5561	.20670	.14243	.96980
q351.1) Who implements this decision	Equal variances assumed	8.656	.004	1.344	69	.183	.6271	.46659	-.30371	1.55795
	Equal variances not assumed			2.120	35.057	.041	.6271	.29576	.02672	1.22751

Decision Making in Livestock related activities Moyo Sub County

T-test for decision making in livestock related households Moyo Sub County.

T-Test

Group Statistics

	q27) Has the presence of HIV/AIDS in the	N	Mean	Std. Deviation	Std. Error Mean
q351.0) Who makes decision in this household	Yes	78	1.3846	.80953	.09166
	No	10	2.0000	.66667	.21082
q351.1) Who implements this decision	Yes	79	2.9241	2.13501	.24021
	No	10	1.9000	.99443	.31447

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
q351.0) Who makes decision in this household	Equal variances assumed	.825	.366	-2.302	86	.024	-.6154	.26729	-1.14675	-.08402
	Equal variances not assumed			-2.677	12.671	.019	-.6154	.22988	-1.11333	-.11744
q351.1) Who implements this decision	Equal variances assumed	1.021	.315	1.491	87	.140	1.0241	.68697	-.34138	2.38948
	Equal variances not assumed			2.588	21.714	.017	1.0241	.39571	.20277	1.84534

Grazing and watering time for livestock Kashumba Sub County

Descriptive statistics for grazing and watering time for livestock Kashumba Sub County

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	q361.0)How many hours do household members spend to take care of livestock before HIV/AIDS?	9.0959	73	3.57135	.41800
	q361.1)How many hours do household members spend on grazing and watering animals as a result of losing a close relative?	7.7466	73	3.91500	.45822

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	q361.0)How many hours do household members spend to take care of livestock before HIV/AIDS? & q361.1)How many hours do household members spend on grazing and watering animals as a result of losing a close relative?	73	.486	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	q361.0)How many hours do household members spend to take care of livestock before HIV/AIDS? - q361.1)How many hours do household members spend on grazing and watering animals as a result of losing a close relative?	1.3493	3.80669	.44554	.4611	2.2375	3.029	72	.003

Grazing and watering time for livestock Moyo Sub County

Descriptive statistics for grazing and watering time for livestock Moyo Sub County

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	How many hours do household members spend to take care of livestock before HIV/AIDS?	6.7625	40	3.52280	.55700
	How many hours do household members spend on grazing and watering animals as a result of losing a close relative?	5.7750	40	2.18957	.34620

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	How many hours do household members spend to take care of livestock before HIV/AIHow many hours do household members spend on grazing and watering animals as a result of losing a close relative?	.9875	2.08931	.33035	.3193	1.6557	2.989	39	.005

Appendix A vii:
STUDY INSTRUMENTS
QUESTIONNAIRE FOR RESPONDENTS

MAKERERE UNIVERSITY
FACULTY OF VETERINARY MEDICINE
P.O.BOX 7062, KAMPALA

IMPACT OF HIV/AIDS ON THE LIVESTOCK- PRODUCING COMMUNITIES OF UGANDA: CASE STUDIES OF MOYO AND KASHUMBA SUBCOUNTIES

INTRODUCTION

Dear respondent, this questionnaire is contributing to the research entitled *"impact of HIV/AIDS on the livestock producing communities of Uganda: case studies of Moyo and Kashumba Sub counties.*

The information generated here shall be used widely to contribute towards the fight against HIV/AIDS as an epidemic scourge. Your responses will be treated confidential. So I encourage you to be free and give us correct information as much as possible.

Thank you very much

District …… Sub county…….

Parish ……. Village ……..

Name of Recorder…… Date …….

Occupation of person being interviewed……..

Name of respondent (optional)……..

Introduction

The purpose of this study is to give livestock communities living in the rural areas the opportunity to tell us how HIV/AIDS has impacted on their lives, communities and livestock .We have been asked to do this work because information related to HIV /AIDS in the rural areas as far as livestock keeping households can be filled.

We are visiting livestock rural communities in Moyo and Kashumba in Uganda and we are told will generate information for decision making by academicians, policy makers and the Government.

You do not have to take part in this study but everyone's opinion is important to us and will help us to represent the views of livestock rural communities. If you do not want to answer any questions you do not have to but all your answers will be kept confidential.

We hope that you will be able to help us with this study. Do you have any questions you would like to ask me?

Thank you

First of all I would like to ask you some questions about yourself.

1. What is your position in the household?

   1. Head 2.Wife 3. Co-wife 4. Husband 5. Son or daughter

   6. Son /daughter-in law 7. Grand child 8. Others (specify)……

2. Sex 1. Male 2. Female
3. Age 1. < 20 2. 20-30 3. 30-40 4. 40-50 5. > 50
4. Marital status

   (a) Have you ever been married or lived together with some one as if married?

   1. Yes 2.No

   (b) At the moment are you married or living together with someone as if married?

   1. Yes 2.No

(c) Do you have more than one wife? 1. Yes 2.No

(d) Altogether how many wives or live –in partners do you/your husband have now?.....

5. Educational achievement (year of schooling) (a) <5 (b) 5-7 (c) 7-11 (d) >11

6. Do you live in this household all the time? 1. Yes 2.No

If YES, for how long have you lived in this household?.....

If NO:

(i) Where do you live most of the time?

(ii) How far is it from this household (km)

(iii) How long does it take to get there?.....By……

7. Why do you come to this household?.....

.....

.....

8. How often do you come to the household? (i) Daily (ii) seasonally (please explain)…….. (iii) Others (please specify)……

9. How long do you usually stay in the household?

(i) Hours (ii) days (iii) weeks (iv) months (v) years

10. Do you have orphans (Under 18 with one or both parents having died) living with you? 1. Yes 2.No

Thank you for answering these questions. Now I would like to ask you some questions about how you earn your living.

11. What kind of work do you mainly do to earn your living? Please tick only one Box (i) cattle farmer (ii) Goat farmer (iii) poultry farmer (iv) pig farmer (v) Others (specify)……..

12. Where do you do this work (Probe: here or some where else?)

Resource	Qty	STATUS					
		Owned	Leased	Hired	Borrowed	Household	

13. What resources do you use for your main work to earn your living?

14. What other kinds of work are you also involved in earning your living? (You can tick more than one box)

(i) Cattle trading (ii) sale of meat (iii) Movement of stock for breeding (iv) others (specify)……

H'hold member	Animal husbandry	Crop farming	Fishing	Food/beer selling	Others (please explain)

15. What do other people in your household do to earn a living? (If living with some one)

16. Please could you tell me approximately how much money you earn a year?

(UShs)……

Income source	Estimated monthly amount (shs)
Sale of livestock	
Sale of beer/food	
Wages for paid work	
Others (please describe)	
Item expenditure	**Estimated monthly amount (shs)**
Food	
Medicine	
Others (please describe)	
Savings	Estimated monthly amount (shs)

17. Please could you tell me roughly how you might earn, or how much you might have to spend on these types of things each month?

18. Have you had to sell your livestock in the last two years? 1. Yes 2.No

If 'yes' could you tell me why you sold them (probe: for medical bills, repairs etc)

……

……

……

Thank you for answering these questions. It would be very helpful to know how illness affects people in this household so that I would like to ask you some questions about this now.

19. Has any one in your household been sick for at least three of the past 12 months? 1. Yes 2.No

20. Do you know what caused this illness? 1. Yes 2.No

If Yes please could you tell me what you think it was ……

21. Has any one in your household died in the last 3 years? 1. Yes 2.No (please be very sensitive over these questions)

If YES, I am sorry for your loss. Please could you tell me who died…….. (position in household)

22. Do you know what caused their death? 1. Yes 2.No

If YES please could you tell me what you think it was……..

23. How many people in this household are ill for some time?.....(number)

Now we would like to talk to you about chronic illness such as HIV/AIDS-generally and about its impact on the household.

24. Are you aware of existence of HIV/AIDS? 1. Yes 2.No

How is HIV transmitted?	**How can some one protect him/her self from being infected from HIV infection?**	**How did you learn about HIV/AIDS?**	**What care and treatment can be given to help some one with HIV lead an active life?**
1. Unprotected sexual contact 2. Blood contact 3. kissing 4. Injections 5. From an infected mother to child 6. Curses/witchcraft 7. Sharing toilet 8. Don't know 9. other specify	1. Abstinence 2. condom use 3. faithfulness 4. limit number of sexual partners 5. avoid sex with prostitutes 6. avoid sex with persons who have many partners 7. avoid sex with homosexuals 8. avoid blood transfusions 9. avoid injections 10. avoid kissing 11. avoid mosquito bites 12. seek protection from traditional healer 13. other ways	1.public campaigns and household 2.Mass media (Radio,TV,bill boards, newspaper) 3. Health education 4.Counseling and testing 5. Training program 6. Others (specify)…… 7.don't know	1. Social, spiritual or emotional support (such as companionship or advice from a counsellorship? 2. Nutritional advice or support 3. Traditional medicine 4. Treatment of infections 5. ARVS (Antiretroviral drugs) 6. Others (specify)

25. Please circle any of the following you think are right:

26. Do you think that livestock communities are particularly vulnerable to HIV/AIDS? 1. Yes 2.No

If YES why do you think this is?

.....

.....

.....

.....

.....

27. Do you think the presence of HIV/AIDS in this household has changed livestock practices over the years? 1. Yes 2.No

If Yes in what ways?

.....

.....

.....

	You	Your household
Not being able to work in order to care for some one who is ill	1. Yes 2.No	1. Yes 2.No
You are having to pay for medicines for the person who is ill	1. Yes 2.No	1. Yes 2.No
You are losing time from working because of attending funerals	1. Yes 2.No	1. Yes 2.No
You have felt that you and your family have been treated differently by the household because of the illness .(if Yes, please explain)	1. Yes 2.No	1. Yes 2.No
You have lost labour considerably in terms of man hours and availability of skilled person	1. Yes 2.No	1. Yes 2.No
Your food and income sources	1. Yes 2.No	1. Yes 2.No

have reduced by a big margin (explain)		
Activities related in livestock production can now not be undertaken	1. Yes 2.No	1. Yes 2.No
Others (please explain)	1. Yes 2.No	1. Yes 2.No

28. How has a chronic illness such as HIV/AIDS impacted on your household?

29. What would happen to your household if you were/ are unable to work due to illness?

Assets would be sold	1. Yes 2.No
You would change livestock practices Probe: (explain how)	1. Yes 2.No
You would work less hours Probe: (explain how)	1. Yes 2.No
Number of labour engaged in livestock production reduced ;Probe: (explain how)	1. Yes 2.No
Your children would have to be taken out of school ;Probe: (explain how)	1. Yes 2.No
You would move back to your original household?	1. Yes 2.No
Why would you move back there?	
Do you have family there?	
What services are there in that household?	
Others (please describe)	1. Yes 2.No

30. If a person of your occupation was infected with HIV how would it affect their ability to carry on earning an income? Probe what would they

do?.....

.....

.....

31. Are you aware of any HIV/AIDS support services this household can have access to?

1. Yes 2.No

32. If some one is suffering from chronic illness such as HIV/AIDS where can they get support from (probe: friend, neighbours, relatives, NGO's, health services, giving monetary help, clothes, food, care, advice, medicine etc)

Name	Type of help

33. How best do you think this household could be helped to prevent the effects of chronic illness such as

HIV/AIDS?.....

.....

.....

.....

.....

Finally I would like to ask you a few questions about the following;

34. Labour for livestock production

1.1 State labour activities involved in livestock production?.....

1.2 How many people were involved in livestock related activities before HIV/AIDS affected the household?.....

1.3 On daily basis how much time do you commit for these activities?.....

1.4 How many members of the household are involved in these activities now?.....

1.5 Has labour for livestock production been affected by members of the household or relative suffering/ died from HIV/AIDS.....

1.6 If so how have they been affected?.....

1.7 Did you hire any labour?.....

1.8 How many did you hire the labour and for how much in kind and monetary terms? (a) Kind .....(b) monetary terms .....

1.9 How has the following been affected? (a) Access to agricultural technology and extension services (b) Indigenous technical knowledge

35. Decision making

1.0 Who takes decision in this household? (a) Father (b) Mother (c) Son (d) Daughter (c) Relative (d) others (specify)…….

1.1 Who implements this decision? (a) Father (b) Mother (c) Son (d) Daughter (c) Relative (d) others (specify)…….

1.2 Who used to take decisions related to livestock activities before HIV/AIDS struck?

Activities	Decision taker	Implementer of the decision
Communal grazing		
Communal watering of animals		
Spraying /dipping		
Deworming		
Milking		
Kraal making		
Paddocking		
Calf rearing		
Dung collection		
Digging wells		
Others (specify)		

1.3 How has livestock related decision changed following the impact of HIV/AIDS on the household?

Activities	**Decision taker**	**Implementer of the decision**
Communal grazing		
Communal watering of animals		
Spraying /dipping		
Deworming		
Milking		
Kraal making		
Paddocking		
Calf rearing		
Dung collection		
Digging wells		
Others (specify)		

1.4 Who was decision taker on livestock related activities before HIV/AIDS affected the household?.....

1.5 Who is now the decision taker on livestock related activities after HIV/AIDS affected the household?.....

1.6 Who used to take decision that an animal should be sold before household was affected by HIV/AIDS?.....

1.7 Who takes decision now that animals are sold for household requirements following the household being affected by HIV/AIDS?.....

1.8 Who was the decision taker that animals be taken for grazing and watering before the household was affected by HIV/AIDS?.....

1.9 Who takes decision now that animals are taken for grazing and watering following the household being affected by HIV/AIDS?

2.0 Who was the decision taker that animals be treated before the household was affected by HIV/AIDS?.....

2.1 Who takes decision now that animals are treated following the household being affected by HIV/AIDS?.....

2.2 Has there being changes in decision making as far as livestock related activities is concerned? (a) Yes (b) No (c) I don't know

36. Grazing and watering time

1.0 How many hours do household members spend to take care of livestock before HIV/AIDS?.....

1.1 How many hours do household members spend on grazing and watering animal as a result of losing a close relative?.....

.....……..……..

1.2 Any effects on your grazing and watering of animal's time since you lost a close relative to HIV/AIDS?.....

1.3 What factors other than HIV/AIDS related could have affected your time for grazing and watering of your livestock?.....

1.4 When a bread winner dies, how has it affected your grazing and watering hours in the management of livestock?.....

1.5 Do you have a feeling that HIV/AIDS leads to direct reduction in labour hours?.....

37. Livestock food variety and quantity sources

.1 Does the household own any land?.....

.2 Size……

.3 Is the land enough to grow food and rear animals…….

Since the testing of the HIV has any of these happened to the household

(a) Reduction in food sources

(b) Reduction in labour force

(b) Selling of the animals

(c) Death of animals i.e. reduced care

(d) Number has remained as before

.4 Did any of the following happen when first tested HIV positive or died of AIDS or lost a relative?

(a) Food was not enough

(b) Land was sold

(c) Growing of the food stopped

(d) Others (specify)……

1.5 Is the situation the same to livestock even when a neighbour dies or relative has HIV/AIDS?.....

1.6 How much money have you been spending on (a) livestock/poultry feeding (b) Veterinary services/medicine (c) other expenses) specify……

1.7 How much money are you spending now (a) Livestock/poultry feeding (b) Veterinary services/medicine (c) other expenses)

specify…….……

1.8 What was the total income from sale of household's livestock before?.....

1.9 What is the total production and income from sale of household's livestock now?.....

2.0 What has been your livestock food variety and quantity sources before you lost a close relative to HIV/AIDS?.....

2.1 What is the current livestock food variety and quantity sources now following the loss of a close relative to HIV/AIDS?.....

2.2 To what quantity has livestock food variety and quantity been affected following loss of a close relative by household to HIV/AIDS? (a) Beef……. (b) Chevron (goat meat)…… (c) Pork……. (d) Chicken ……(e) ducks……. (f) Pigeons……. (g) (Turkey)…….. (h) Guinea fowl ……..(i) Milk…… (j) Ghee …….(k) butter…… (l) Cheese……. (m) eggs…….. (n) Others (specify)……..

2.3 Any other factors other than HIV/AIDS that might have affected your livestock variety and quantity food sources?.....

2.4 Has a livestock epidemic hit you in the last 5 years that grossly affected your livestock food variety and quantity sources?.....

2.5 If so which epidemic and what species were affected and how many animals have you lost?.....

2.6 Do you have a feeling that the livestock productivity has been affected by effects of HIV/AIDS?.....If so How?.....

2.7 How did you continue to get food?.....

2.8 How was your income flow before?.....

2.9 How is your income flow now?.....

2.10 How was the income affected?.....

2.11 What is the current livestock food variety and quantity?.....

2.12 How has your livestock food variety and quantity been?.....

2.13 What factors other than HIV/AIDS related could have affected your livestock food variety and quantity?.....

2.14 How has the household livestock food variety and quantity been affected following the death of a close relative?.....

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1.1 What livestock farming practices are you engaged in?.....

1.2 Who is fully involved in these activities?.....

1.3 Do you have sufficient knowledge on these activities?.....

1.4 Are there technical personnel in livestock related activities that help you?.....

1.5 How do you carry out the activities you have listed in (1.1 a) ……

1.6 What farming practices in your view could worsen the effects of HIV/AIDS?.....

39. COPING STRATEGIES FOR HOUSEHOLDS AFFECTED BY THE EFFECTS OF HIV/AIDS

1.1 How have you been affected by the effects of HIV/AIDS?.....

1.2 What have you done to minimize the effects of HIV/AIDS?.....

1.3 What survival strategies have you put in place to address the effects?.....

1.4 What major coping strategies would you recommend for use?.....

40. ROLE OF LIVESTOCK IN MITIGATING THE EFFECTS OF HIV/AIDS

1.1 What is the role of livestock in your household?.....

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2.2 How has livestock contributed in mitigating the effects of HIV/AIDS?.....

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NB: For Clarification please contact me on the above address

Appendix A (viii): Focus group Discussion guidelines for the groups

Discussion questions

Impact of HIV/AIDS on the livestock producing communities of Uganda; *Case studies of Moyo and Kashumba sub counties".*

Discussion Questions		
Descriptive	1	What do you know about HIV/AIDS?
Real life or existence	2	Does this happen here? Give examples?
Analysis	3	Why do we have this problem of HIV/AIDS in our communities? Why?.....Why ?.....why……..
	4	What effects does the problem of HIV/AIDS have on: ❖ Women, men, children, on the community. ❖ Labour for livestock production ❖ Decision making ❖ Grazing and watering time ❖ Livestock food variety and quantity ❖ Farming practices ❖ Coping strategies
		What livestock farming practices exist that you normally use and may aggravate the effects of HIV/AIDS.
Projectional motivation	5	If the problem persists or continues, what do you think will happen? (a) labour for livestock production (b) decision making (c) grazing and watering time (d) Livestock food variety and quantity (f) farming practices (g) coping strategies
Action planning		What coping mechanism, does exist to manage the scourge. What can be done to manage the scourge (a) as individuals (b) as households (c) as a community? How has livestock contributed in mitigating the effects of HIV/AIDS?

Appendix A vii:

STUDY INSTRUMENTS

QUESTIONNAIRE FOR RESPONDENTS

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FACULTY OF VETERINARY MEDICINE
P.O.BOX 7062, KAMPALA

IMPACT OF HIV/AIDS ON THE LIVESTOCK-PRODUCING COMMUNITIES OF UGANDA: CASE STUDIES OF MOYO AND KASHUMBA SUBCOUNTIES

INTRODUCTION

Dear respondent, this questionnaire is contributing to the research entitled *"impact of HIV/AIDS on the livestock producing communities of Uganda: case studies of Moyo and Kashumba Sub counties.*

The information generated here shall be used widely to contribute towards the fight against HIV/AIDS as an epidemic scourge. Your responses will be treated confidential. So I encourage you to be free and give us correct information as much as possible.

Thank you very much

District …… Sub county…….

Parish ……. Village ……..

Name of Recorder…… Date …….

Occupation of person being interviewed……..

Name of respondent (optional)……..

Introduction

The purpose of this study is to give livestock communities living in the rural areas the opportunity to tell us how HIV/AIDS has impacted on their lives, communities and livestock .We have been asked to do this work because information related to HIV /AIDS in the rural areas as far as livestock keeping households can be filled.

We are visiting livestock rural communities in Moyo and Kashumba in Uganda and we are told will generate information for decision making by academicians, policy makers and the Government.

You do not have to take part in this study but everyone's opinion is important to us and will help us to represent the views of livestock rural communities. If you do not want to answer any questions you do not have to but all your answers will be kept confidential.

We hope that you will be able to help us with this study. Do you have any questions you would like to ask me?

Thank you

First of all I would like to ask you some questions about yourself.

6. What is your position in the household?

   1. Head 2.Wife 3. Co-wife 4. Husband 5. Son or daughter

   6. Son /daughter-in law 7. Grand child 8. Others (specify)……

7. Sex 1. Male 2. Female
8. Age 1. < 20 2. 20-30 3. 30-40 4. 40-50 5. > 50
9. Marital status

   (a) Have you ever been married or lived together with some one as if married?

   1. Yes 2.No

   (b) At the moment are you married or living together with someone as if married?

   1. Yes 2.No

   (c) Do you have more than one wife? 1. Yes 2.No

(d) Altogether how many wives or live –in partners do you/your husband have now?.....

10. Educational achievement (year of schooling) (a) <5 (b) 5-7 (c) 7-11 (d) >11

6. Do you live in this household all the time? 1. Yes 2.No

If YES, for how long have you lived in this household?.....

If NO:

(iv) Where do you live most of the time?

(v) How far is it from this household (km)

(vi) How long does it take to get there?.....By……

7. Why do you come to this household?.....

.....

.....

8. How often do you come to the household? (i) Daily (ii) seasonally (please explain)…….. (iii) Others (please specify)……

9. How long do you usually stay in the household?

(i) Hours (ii) days (iii) weeks (iv) months (v) years

10. Do you have orphans (Under 18 with one or both parents having died) living with you? 1. Yes 2.No

Thank you for answering these questions. Now I would like to ask you some questions about how you earn your living.

11. What kind of work do you mainly do to earn your living? Please tick only one Box (i) cattle farmer (ii) Goat farmer (iii) poultry farmer (iv) pig farmer (v) Others (specify)……..

12. Where do you do this work (Probe: here or some where else?)

Resource	Qty	STATUS					
		Owned	Leased	Hired	Borrowed	Household	

13. What resources do you use for your main work to earn your living?

14. What other kinds of work are you also involved in earning your living? (You can tick more than one box)

(i) Cattle trading (ii) sale of meat (iii) Movement of stock for breeding (iv) others (specify)……

H'hold member	Animal husbandry	Crop farming	Fishing	Food/beer selling	Others (please explain)

15. What do other people in your household do to earn a living? (If living with some one)

16. Please could you tell me approximately how much money you earn a year?

(UShs)……

Income source	Estimated monthly amount (shs)
Sale of livestock	

Sale of beer/food	
Wages for paid work	
Others (please describe)	
Item expenditure	**Estimated monthly amount (shs)**
Food	
Medicine	
Others (please describe)	
Savings	Estimated monthly amount (shs)

17. Please could you tell me roughly how you might earn, or how much you might have to spend on these types of things each month?

18. Have you had to sell your livestock in the last two years? 1. Yes 2.No

If 'yes' could you tell me why you sold them (probe: for medical bills, repairs etc)

……

……

……

Thank you for answering these questions. It would be very helpful to know how illness affects people in this household so that I would like to ask you some questions about this now.

19. Has any one in your household been sick for at least three of the past 12 months? 1. Yes 2.No

20. Do you know what caused this illness? 1. Yes 2.No

If Yes please could you tell me what you think it was ……

21. Has any one in your household died in the last 3 years? 1. Yes 2.No (please be very sensitive over these questions)

If YES, I am sorry for your loss. Please could you tell me who died…….. (position in household)

22. Do you know what caused their death? 1. Yes 2.No

If YES please could you tell me what you think it was……..

23. How many people in this household are ill for some time?.....(number)

Now we would like to talk to you about chronic illness such as HIV/AIDS-generally and about its impact on the household.

24. Are you aware of existence of HIV/AIDS? 1. Yes 2.No

How is HIV transmitted?	**How can some one protect him/her self from being infected from HIV infection?**	**How did you learn about HIV/AIDS?**	**What care and treatment can be given to help some one with HIV lead an active life?**
10. Unprotected sexual contact 11. Blood contact 12. kissing 13. Injections 14. From an infected mother to child 15. Curses/witchcraft 16. Sharing toilet 17. Don't know 18. other specify	14. Abstinence 15. condom use 16. faithfulness 17. limit number of sexual partners 18. avoid sex with prostitutes 19. avoid sex with persons who have many partners 20. avoid sex with homosexuals 21. avoid blood transfusions 22. avoid injections 23. avoid kissing 24. avoid mosquito bites	1.public campaigns and household 2.Mass media (Radio,TV,bill boards, newspaper) 3. Health education 4.Counseling and testing 5. Training program 6. Others (specify)…… 7.don't know	7. Social, spiritual or emotional support (such as companionship or advice from a counsellorship? 8. Nutritional advice or support 9. Traditional medicine 10. Treatment of infections 11. ARVS (Antiretroviral drugs) 12. Others (specify)

	25. seek protection from traditional healer 26. other ways		

25. Please circle any of the following you think are right:

26. Do you think that livestock communities are particularly vulnerable to HIV/AIDS? 1. Yes 2.No

If YES why do you think this is?

.....

.....

.....

.....

.....

27. Do you think the presence of HIV/AIDS in this household has changed livestock practices over the years? 1. Yes 2.No

If Yes in what ways?

.....

.....

.....

	You	Your household
Not being able to work in order to care for some one who is ill	1. Yes 2.No	1. Yes 2.No
You are having to pay for medicines for the person who is ill	1. Yes 2.No	1. Yes 2.No
You are losing time from working because of attending funerals	1. Yes 2.No	1. Yes 2.No
You have felt that you and your family have been treated differently by the household because of the illness .(if Yes, please explain)	1. Yes 2.No	1. Yes 2.No

You have lost labour considerably in terms of man hours and availability of skilled person	1. Yes 2.No	1. Yes 2.No
Your food and income sources have reduced by a big margin (explain)	1. Yes 2.No	1. Yes 2.No
Activities related in livestock production can now not be undertaken	1. Yes 2.No	1. Yes 2.No
Others (please explain)	1. Yes 2.No	1. Yes 2.No

28. How has a chronic illness such as HIV/AIDS impacted on your household?

29. What would happen to your household if you were/ are unable to work due to illness?

Assets would be sold	1. Yes 2.No
You would change livestock practices Probe: (explain how)	1. Yes 2.No
You would work less hours Probe: (explain how)	1. Yes 2.No
Number of labour engaged in livestock production reduced ;Probe: (explain how)	1. Yes 2.No
Your children would have to be taken out of school ;Probe: (explain how)	1. Yes 2.No
You would move back to your original household?	1. Yes 2.No
Why would you move back there?	
Do you have family there?	
What services are there in that household?	

Others (please describe)	1. Yes 2.No

30. If a person of your occupation was infected with HIV how would it affect their ability to carry on earning an income? Probe what would they do?.....
.....
.....

31. Are you aware of any HIV/AIDS support services this household can have access to?
1. Yes 2.No

32. If some one is suffering from chronic illness such as HIV/AIDS where can they get support from (probe: friend, neighbours, relatives, NGO's, health services, giving monetary help,clothes,food,care,advice,medicine etc)

Name	Type of help

33. How best do you think this household could be helped to prevent the effects of chronic illness such as
HIV/AIDS?.....
.....
.....
.....
.....

Finally I would like to ask you a few questions about the following;

34. Labour for livestock production

1.1 State labour activities involved in livestock production?.....

1.2 How many people were involved in livestock related activities before HIV/AIDS affected the household?.....

1.3 On daily basis how much time do you commit for these activities?.....

1.4 How many members of the household are involved in these activities now?.....

1.5 Has labour for livestock production been affected by members of the household or relative suffering/ died from HIV/AIDS.....

1.6 If so how have they been affected?.....

1.7 Did you hire any labour?.....

1.8 How many did you hire the labour and for how much in kind and monetary terms? (a) Kind .....(b) monetary terms .....

1.9 How has the following been affected? (a) Access to agricultural technology and extension services (b) Indigenous technical knowledge

35. Decision making

1.0 Who takes decision in this household? (a) Father (b) Mother (c) Son (d) Daughter (c) Relative (d) others (specify)…….

1.1 Who implements this decision? (a) Father (b) Mother (c) Son (d) Daughter (c) Relative (d) others (specify)…….

1.2 Who used to take decisions related to livestock activities before HIV/AIDS struck?

Activities	**Decision taker**	**Implementer of the decision**
Communal grazing		
Communal watering of animals		
Spraying /dipping		
Deworming		
Milking		
Kraal making		
Paddocking		
Calf rearing		

Dung collection		
Digging wells		
Others (specify)		

1.3 How has livestock related decision changed following the impact of HIV/AIDS on the household?

Activities	**Decision taker**	**Implementer of the decision**
Communal grazing		
Communal watering of animals		
Spraying /dipping		
Deworming		
Milking		
Kraal making		
Paddocking		
Calf rearing		
Dung collection		
Digging wells		
Others (specify)		

1.4 Who was decision taker on livestock related activities before HIV/AIDS affected the household?.....

1.5 Who is now the decision taker on livestock related activities after HIV/AIDS affected the household?.....

1.6 Who used to take decision that an animal should be sold before household was affected by HIV/AIDS?.....

1.7 Who takes decision now that animals are sold for household requirements following the household being affected by HIV/AIDS?.....

1.8 Who was the decision taker that animals be taken for grazing and watering before the household was affected by HIV/AIDS?.....

1.9 Who takes decision now that animals are taken for grazing and watering following

the household being affected by HIV/AIDS?

2.0 Who was the decision taker that animals be treated before the household was affected by HIV/AIDS?.....

2.1 Who takes decision now that animals are treated following the household being affected by HIV/AIDS?.....

2.2 Has there being changes in decision making as far as livestock related activities is concerned? (a) Yes (b) No (c) I don't know

36. Grazing and watering time

1.0 How many hours do household members spend to take care of livestock before HIV/AIDS?.....

1.1 How many hours do household members spend on grazing and watering animal as a result of losing a close

relative?.....

.....……..……..

1.2 Any effects on your grazing and watering of animal's time since you lost a close relative to HIV/AIDS?.....

1.3 What factors other than HIV/AIDS related could have affected your time for grazing and watering of your livestock?.....

1.4 When a bread winner dies, how has it affected your grazing and watering hours in the management of livestock?.....

1.5 Do you have a feeling that HIV/AIDS leads to direct reduction in labour hours?..... **37.**

Livestock food variety and quantity sources

.5 Does the household own any land?.....

.6 Size……

.7 Is the land enough to grow food and rear animals…….

Since the testing of the HIV has any of these happened to the household

(a) Reduction in food sources

(b) Reduction in labour force

(b) Selling of the animals

(c) Death of animals i.e. reduced care

(d) Number has remained as before

.8 Did any of the following happen when first tested HIV positive or died of AIDS or lost a relative?

(a) Food was not enough

(b) Land was sold

(c) Growing of the food stopped

(d) Others (specify)……

1.5 Is the situation the same to livestock even when a neighbour dies or relative has HIV/AIDS?.....

1.6 How much money have you been spending on (a) livestock/poultry feeding (b) Veterinary services/medicine (c) other expenses) specify……

1.7 How much money are you spending now (a) Livestock/poultry feeding (b) Veterinary services/medicine (c) other expenses)

specify…….……

1.8 What was the total income from sale of household's livestock before?.....

1.9 What is the total production and income from sale of household's livestock now?.....

2.0 What has been your livestock food variety and quantity sources before you lost a close relative to HIV/AIDS?.....

2.1 What is the current livestock food variety and quantity sources now following the loss of a close relative to HIV/AIDS?.....

2.2 To what quantity has livestock food variety and quantity been affected following loss of a close relative by household to HIV/AIDS? (a) Beef……. (b) Chevron (goat meat)…… (c) Pork……. (d) Chicken ……(e) ducks……. (f) Pigeons……. (g) (Turkey)…….. (h) Guinea fowl ……..(i) Milk…… (j) Ghee …….(k) butter…… (l) Cheese……. (m) eggs…….. (n) Others (specify)……..

2.3 Any other factors other than HIV/AIDS that might have affected your livestock variety and quantity food sources?.....

2.4 Has a livestock epidemic hit you in the last 5 years that grossly affected your livestock food variety and quantity sources?.....

2.5 If so which epidemic and what species were affected and how many animals have you lost?.....

2.18 Do you have a feeling that the livestock productivity has been affected by effects of HIV/AIDS?.....If so How?.....

2.19 How did you continue to get food?.....

2.20 How was your income flow before?.....

2.21 How is your income flow now?.....

2.22 How was the income affected?.....

2.23 What is the current livestock food variety and quantity?.....

2.24 How has your livestock food variety and quantity been?.....

2.25 What factors other than HIV/AIDS related could have affected your livestock food variety and quantity?.....

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		What livestock farming practices exist that you normally use and may aggravate the effects of HIV/AIDS.
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Action		What coping mechanism, does exist to manage the scourge.

planning		What can be done to manage the scourge (a) as individuals (b) as households (c) as a community? How has livestock contributed in mitigating the effects of HIV/AIDS?

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RE: Final submission of bound copies of MSc. Dissertations

Kindly receive my three bound copies of my MSc. Dissertations entitled;
Impact of HIV/AIDS on the Livestock- Producing communities in Uganda: Case studies of Moyo and Kashumba sub counties.

Thank you very much for your usual support.

Yours faithfully,

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