ASSESSMENT OF THE CONTRIBUTIONS OF INDIGENOUS CHICKEN PRODUCTION TO FARMERS LIVELIHOODS IN LWENGO SUB COUNTY, LWENGO DISTRICT.

SSEMWOGERERE JEREVAZIO

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A RESEARCH REPORT SUBMITTED TO THE FACULTY OF AGRICULTURE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE IN AGRICULTURE DEGREE OF UGANDA MARTYRS UNIVERSITY NKOZI.

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DECLARATION.

I, Ssemwogerere Jerevazio, declare that all the contents of this report are a product of my findings and investigations in areas where data has collected. Some additional information used from other people has been acknowledged. This research work has never been produced or presented by any other individual or institution for any award.

Name of Researcher.

Ssemwogerere. Jerevazio

Signature …….…….

Date……

APPROVAL

I hereby certify that, this research entitled **Assessment of the contributions of indigenous chicken production to farmer's livelihoods in Lwengo Sub County Lwengo District** has been done under my supervision and its now due for submission.

Name of supervisor

Dr. Charles Kudamba

Signature……

Date ……

DEDICATION.

This research work is dedicated to my dear Lovely one, Nakijoba Deodata my Aunt, and Julie Desroches my best Friend, Lilian my Wife, for all the care, assistance, love and financial assistance.

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I give glory and honor to the almighty God for the gift of life and taking me through all years of my studies.

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Am grateful for the support provided by sub-county veterinary and production staffs of Lwengo Sub County and the district at large and in particular many thanks goes to the local poultry farmers who provided all the necessary information. Many other people contributed to the success of this work, directly or indirectly, am grateful to you all.

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LIST OF ACRONYMS

CBO Community based organization

NGO Non Government organization

NCD New Castle Disease

IBD Infectious bronchitis disease

KIIs. Key informants

FGD. Focus group discussion

GVT. Government

ABSTRACT.

This study's main objective was to assess the contributions of indigenous chicken production on farmer's livelihood in Lwengo sub county, Lwengo District. This study used a cross-sectional design to collect data from rural households and communities using survey and ethnographic study approaches. While the survey component was crucial in gaining a deeper understanding of the extent of contribution of indigenous birds to farmers livelihoods. A Total of 104 household's members were interviewed and one respondent represented each household. In addition, 03 Focus Group Discussions (FGDs) conducted, including several key informant interviews.

The results indicate that indigenous poultry is a major component of rural livelihoods in Lwengo Sub County where at least each homestead keep indigenous chicken. A large percentage of poultry farmers are women since men usually leave poultry farming to women and children because of the perception that poultry farming is a minor and not benefitting men's efforts. This implies that women play a significant role in poultry keeping and as a result, poultry contribute directly to household food security and the wellbeing of children.

In all areas villages visited, Household interviews show that majority of respondents obtained food, household items and consumables, such as source pans, paraffin, etc from selling poultry. In some instances, respondents reported converting poultry into other large domestic animals, such as exchanging chicken for goats. Based on findings from this study, we suggest some policy recommendations.

First, we recommend policy interventions in the indigenous poultry sector in Lwengo Sub County in order to enhance the benefits of indigenous poultry in farmer's livelihoods. There should be public information and education programs on indigenous poultry production.

There is need to form indigenous poultry clubs and associations for formal institutional set ups, such as task forces to fight disease outbreaks but should also use informal institutions, such as village community organizations to spread the message. Here, the important message is that it is easier to manage groups than scattered individual farmers.

Finally, there should be an increased investment in research and development through introduction of multi-disciplinary approach to research about the role of indigenous poultry in farmer's livelihoods.

CHAPTER ONE: GENERAL INTRODUCTION

1.0 Introduction

Poultry production in Uganda is one of the areas of importance in the national economy and performs a major role in improving the nutritional status and income for many small holder farmers and landless communities through provision of eggs and meat for home consumption as well as surplus for the market. Over 70% of the poultry products and 20% of animal protein in Uganda comes from this sector.

Indigenous chicken are kept for meat, eggs, income and socio-cultural roles. In spite of the current level of introduction of exotic chickens in Uganda, local chickens have continued to be sold well in urban areas and demand for them still exceeds supply. Indigenous chickens are preferred to exotic ones because of their pigmentation, organoleptic qualities (taste and flavour), leanness and suitability for special dishes (Ssewanyana *et al*., 2001).

The poultry industry in Uganda is mainly based on free-range (scavenging) indigenous chickens which are kept at the subsistence level and are found in almost all households (Mukiibi-Muka1992). Uganda's chicken population has in the mean time increased from 23.5 million in 2005 to 37.4 million in 2008. of the current chicken population over 80% are indigenous to Uganda (MAAIF 2008).

Despite the introduction of exotic chicken breeds, the indigenous chickens still dominate in Uganda. Elsewhere, Guèye (1998) and Sonaiya et al (1999) observed that village poultry represent an important component of rural household livelihood as a source of income, nutrition and as gifts to strengthen social relationships.

Traditionally, indigenous chickens are mainly sold when there is a need for money by a farmer. In some places, the chickens are sold in indigenous markets to hawkers or middlemen who subsequently assemble and transport them to urban traders (Okot 1990).

1.1 Background

According to the records in the District Veterinary Officer’s office, information on poultry is scarce and as such poultry production in Lwengo Sub County is not considered as source of livelihood to farmers. It is on the basis of such information that investigating the contributions of indigenous chicken on farmer’s livelihoods in the sub county is the core area of study in this investigation.

1.2 Problem statement.

Indigenous Poultry production is one of the important protein sources and income generating activity in Lwengo Sub County. Unfortunately the enterprise is not given priority for intervention towards improving farmer's income in this area. Therefore the study was carried out to assess the contributions of indigenous chicken production on farmer's livelihoods.

1.3. Objectives

1.3. 1 Major objective of the study.

The major objective of the study was to assess the contributions of indigenous chicken production to farmer's livelihoods in Lwengo Sub County, Lwengo district.

1.3.2 Specific objectives of the study.

- To determine the status of indigenous chicken production in Lwengo sub county.
- To identify the existing factors affecting the production of indigenous chicken in Lwengo sub county
- To determine benefits of indigenous chicken production in Lwengo sub county.
- To identify ways of improving indigenous chicken production in Lwengo sub county.

1.4 Research questions.

1. What is the status of indigenous chicken production in Lwengo Sub County?
2. What are the the existing factors affecting the production of indigenous chicken in Lwengo Sub County?
3. What are the benefits of indigenous chicken production in Lwengo Sub County?
4. What are the major common diseases affecting indigenous birds in Lwengo sub county?
5. What are the various ways of improving indigenous chicken production?

1.5 Justification/Significance of the Study.

The study findings would contribute to substantial awareness to different stake holders working with indigenous chicken production in Lwengo Sub County like CBO and NGOs.

The study would contribute to improved performance of Indigenous chicken poultry production among farmers in the area hence increased incomes and sustainability.

The findings would also be helpful to policy makers like non government Organizations to identify the necessity of initiating projects and formulation of policies aimed at promoting poultry production in the sub county.

Future researchers would find the results more useful and it will help them to expand their knowledge on research. The results also would serve as a source of reference to student's scholars and researchers interested in poultry production and management.

CHAPTER TWO: LITERATURE REVIEW

2.1 Benefits of indigenous chicken.

Although reliable data is not available in Uganda, the importance of poultry in the national economy and its role in improving the nutritional status and incomes of the population is well recognized. The economic and nutrient contribution of indigenous free-range poultry has not been evaluated but is estimated to contribute over 80% of the per capita consumption of poultry meat and eggs while the 20% is by the commercial poultry sector .Indigenous poultry are found all over the country though the majority of these birds are found in the Eastern parts of Uganda (Ssewanyana et al., 2001).

Indigenous chickens are predominant in villages despite the introduction of exotic and crossbred types, because farmers are not able to afford the high input requirements of introduced breeds. In most villages, the birds have no regular health control program, may or may not have shelter, and scavenge for most of their nutritional needs. They form part of an indigenous and integral part of the farming system, with short life cycles and quick turnovers, low-input production systems with outputs accessible at both inter-household and intra-household levels and a means of converting low-quality feed into high-quality protein.

Poultry in traditional village poultry systems provide scarce animal protein in the form of meat and eggs, and are available for sale or barter in societies where cash is not abundant.
They are generally owned and managed by women and children. Village chickens also fulfill a range of other functions for which it is difficult to assign a monetary value. They are active in pest control, provide manure, are required for special festivals and to meet social obligations, they are essential for many traditional ceremonies (such as slaughter for important guests) and traditional treatment of illness.

The increased availability of village poultry and eggs should result in an improved intake of protein by the population and increased access to cash and other resources. Poultry are often essential elements of female-headed and poor households. This is a particularly important contribution in areas where child malnutrition is common.

The hens produce about 2-4 clutches a year each of about 10 – 12 eggs (Byarugaba etal., 2002, Ssewanyana et al., 2003).

2.2. Factors affecting indigenous village poultry production.

One of the major constraints to village poultry production in Uganda is undoubtedly the existence of various diseases (Ojok, 1993). The problem of diseases in village chickens is compounded by the interaction of different entities that are of significant importance to disease epidemiology.

2.2.1 Poor housing systems

This is the main management system for the majority of local poultry in Uganda (Byarugaba, 2002; Ssewanyana *et al.*, 2003c; Kyarisiima 2004). The free-range chicken production system is an integrated part of the farming system with low input-output.

Local poultry houses meet some of the basic requirements like protection against inclement weather but rarely provide adequate space and ventilation. Kirunda *et al.* (2003) estimated that mortality of indigenous poultry under scavenging conditions is 70% and above in chicks up to 8 weeks of age, which greatly inhibit increase in the number of local poultry populations. Presence of predators exacerbates the losses but local poultry keepers have improvised by applying dye on chicks.

2.2.2 Use of low quality feeds

Local poultry rearing serves as a means to convert low-quality feed (household waste) into high protein. The birds range freely during the day and are usually gathered at night into a basic shelter for protection against predators.

Local poultry usually scavenge for most of their feed requirements and the feed resource in this system is limited to the available nutrients in the area that include insects, seeds, discarded grain and kitchen wastes. There is no provision of water by the farmer allowing flocks to get water from any available source.

2.2.3 Poor management system

Most farmers use extensive system which exposes birds to predators. With improvements in management, housing and flock size, birds can perform better. Some farmers also follow intensive-based health programs for vaccination against common diseases and the general disease control methodologies practiced in the intensive system.

2.2.4 Lack of proper Marketing structures for local birds.

Marketing of local poultry is not well defined. In many parts of Africa, including Uganda, chicken are sold to meet unforeseen expenses. The birds usually sold from the village flock are surplus males (cockerels and cocks); pullets and non-productive hens; large sized birds; old hens and sick birds. Growing chicken are sold just before the onset of the high risk Newcastle Disease (Byarugaba, 2007).

2.2.5 Poor market prices

The market price for free range birds is usually stable due to traditional taste values placed on their meat. Local chicken meat is considered tastier and stronger flavored than commercial broiler meat; the meat (muscle tissue) is tougher and retains its texture when prepared in traditional dishes and the birds are not fed with compounded feed which may contain antibodies, anti moulds compounds, enzymes, sulpha drugs and other medicines or synthetic chemicals.

Whereas free-range poultry meat and eggs are generally perceived to taste better than broiler meat and commercial layer eggs, their prices are often higher and this may mean that consumers select from other protein sources available. There are several other sources of animal protein which compete more favorably in urban and suburban areas in terms of prices, for example beans, beef, broiler and fish.

All male and female members of the household are involved in the marketing of free range chicken. The women are involved more at farm gate level while the trade is mainly male-dominated in markets and in trading centers. Although there is a weight and size consideration both at sale and purchase, there is no established means of verification. Chickens are usually sold live to fellow farmers, retailers or consumers.

2.2.6 Seasonal price fluctuations for local birds

The seasonal effects of price fluctuations depend on festive seasons, crop activities and disease outbreaks. Thus in a season when crops are likely to be destroyed by chickens or in a period when ND strikes, most farmers will sell most of their chickens (Mukiibi-Muka, 1992). At festive seasons such as Christmas the prices will be higher due to increased demand.

2.2.7 Poor Transportation facilities

Since there is no specialized transport of live chickens, the birds are bundled together either on strings or baskets and are transported on different means of public transport available such as

motorcycles, lorries, buses or mini-buses together with passengers. Such kind of transportation is a risk factor for possible transmission of zoonotic infections.

Although farmers get information that chickens may fetch high prices in towns or if they sold to institutions, they lack the capacity and economies of scale to gather enough stock for such a transaction.

2.2.8 Disease outbreaks

This affects both farmers and middlemen. When disease breaks out in an area, farmers will panic and sell their chickens cheaply. Similarly, the middlemen who buy the chickens cheaply may also lose a number of them due to disease.

One of the major constraints to village poultry production in Uganda and developing countries in general is undoubtedly the existence of various diseases (Ojok, 1993). Among the diseases most commonly recognized is Newcastle disease, which has been ranked the most important (Mukiibi-Muka, 1992; Byarugaba, 2007). It is important to vaccinate against Newcastle disease regularly starting with chicks. However, in the small scale poultry production system, vaccination is not done because farmers have a problem to purchase the vaccines as they are usually packed in big doses. Other poultry diseases like Fowl typhoid, Gumboro, Fowl pox etc., are still endemic and also become prominent where vaccinations against NCD have been done. There are also parasites both external and internal, which are well recognised by the farmers (Kiddu-Makubuya, 1998; Lubwama, 2002). Some of the parasites such as stick tight fleas are known to cause serious

2.2.9 Lack of information on prices

The farmers depend on information given to them by traders and often the traders will want to maximize their own profits by offering as low a price as possible.

2.2.10 Poor breeding stock for indigenous birds

According to Mukiibi-Muka (2003), barter trade, gifts and markets are the main sources of local poultry breeding stock. However the quantity and quality of the various sources have not been evaluated. In Hoima, it was reported that farmers' groups incubate and hatch local and crossbred chicks which they sell at UGS 1000/- per chick. In Kampala and Mukono private companies like the Uganda Local Chicken Rearers Association, based at Kamwokya, hatch and sell local day-old chicks.

2.3 Improvement of indigenous poultry

Indigenous poultry production can be increased through proper breeding and management, proper housing, proper feeding, good genetic selection, record keeping, marketing for products and better diseases management.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

This chapter involves the areas where data was collected, instruments for data collection, study population and sample size which involved 104 farmers from 12 villages.

3.1 Research design

The study took a descriptive cross section approach which allowed the researcher to explore and describe a phenomenon in its real situation. Data collection was qualitative and quantitative in nature as it involved various information from different stakeholders.

3.2 Study Area

The study was conducted at Lwengo Sub County in Lwengo District in the southern part of Uganda from June 2013 to May 2014 and five parishes were the main focus areas with a representative sample in rural villages that's to say, Nakyenyi ,Nkunyu, Kyetume, Kyawagonya, Kyasenya, Lwenkakala, Kyanjovu , Buzinga, Katoma, Bijigo Kito and Mayira.

3.3 Study population

Mugenda [2003] defines population as a large group people from which a number of individuals are selected for a study. The study population included poultry farmers and other stakeholders in the enterprise chain.

The study targeted indigenous poultry keepers whose livelihood and food security partly depended on indigenous chicken/birds. All respondents were at least 18 years of age, as this is the age at which people in Uganda are considered mature and able to make decisions on their own. Women are often involved in poultry farming, and were particularly targeted for the sample, because they are directly involved in backyard poultry farming and generate income that benefits their children through improved household nutrition and other domestic needs.

The populations for this study were household members in randomly selected in the villages in the sub county.

3.4 Sample Size and selection

A sampling procedure was applied for key informants where by they were purposively selected. Also in random selection was applied to the study while selecting farmers. Local leaders were actively involved in the selection of farmer's representatives in the study area. Simple random

sampling technique was applied to choose 08 indigenous chicken farmers from each village by giving equal chance for those farmers who sell indigenous chickens atleast every month. Hence, 104 indigenous chicken farmers was interviewed using structured questionnaire from the following villages, Nakyenyi ,Nkunyu, Kyetume, Kyawagonya, Kyasenya,Lwenkakala, Kyanjovu , Buzinga, Katoma, Bijigo Kito and Mayira.

3.5 Data Collection

Data collection in this study is referred to gathering information for research purposes [Burns and grove 2003 page 91] Data collection was carried out intensively by use of questionnaires, observations, interviews; focus group discussions from the selected respondents using an organized and pre-tested structured questionnaire.

Direct observation was also used to assess available indigenous chickens, chicken feeding and housing practices. A closer visit in and around the residential quarters of the selected households was made in order to obtain first hand observation on all aspects of indigenous chickens. Appropriate data such as indigenous chicken production systems, flock dynamics and production and marketing constraints affecting profitability gathered from individual indigenous chicken farmers. FGDs were also carried out. Secondary data was collected from various publications about poultry production and management.

3.5.1 Data collection exercise

The researcher took great care in the collection of data. Research questionnaires were prepared in advance and translated into local language and then back to English for better understanding and to ensure that the researcher had elicited similar responses and so with the KII and FGDs questionnaires

3.5.2 Data collection instruments

The study was guided by the following instruments, questionnaires, FGDs and by observations.

3.5.2 Questionnaires.

Questionnaires were of 2 types. Key informants were administered questionnaires and indigenous poultry keepers in the area were administered questionnaires of another type. It included open for key informants and closed ended questions for farmers to enable expression and exchange of views and opinions. Questionnaires can be found in the appendices.

3.5.3. Oral interview guide.

There was communication face to face contact or conversation using structured questions to collect primary data with some farmers who had little time to take active role in the exercise.

3.5.4 FGDs

FGDs involved between five and eight community members in the sampled study areas. Separate FGDs were arranged for men and women. This allowed comparisons between the experiences of men and women, who tend to have different roles within the household and the community regarding such issues as regards to income, nutrition and health. It also ensured that women could express themselves more freely than would have been the case if men had been present.

KIIs were arranged to provide a deeper understanding of the contributions of indigenous chicken production on farmer's livelihoods and to complement providing deeper insights into the findings of the survey analysis. These interviews involved local leaders, opinion leaders, sub county staff and significant farmers involved in poultry keeping.

For the purposes of this study, the head of household was defined as the person who usually makes purchasing decisions in the household. In cases where the household head was not available, and not within 10 minutes waiting time, another available adult was asked to respond. Selected households were to be replaced if all household members were absent on two occasions, but no selected household had to be replaced in this study.

3.6 Data processing and analysis

Key findings were transformed into themes for easy analysis and presentation of data. Analysis of data was carried out using qualitative means. It involved taking notes and tabulation to ensure clear and easy presentation of research findings.

CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.0 Introduction.

In this chapter, the researcher endeavors to assess the data collected in respect to contribution of indigenous chicken production in Lwengo Sub County, Lwengo district. Farmers were interviewed to seek their opinions on the subject of study. Secondary data was obtained from different literature sources such as annual reports, magazines, and texts and among others.

In the village communities where I visited, a large proportion of indigenous chicken keepers apply smallholder production systems. Birds kept in these systems represent an important contribution to household food security and income, including social capital, and to poultry biodiversity at not only the household and local levels but also the national level.

A large percentage of chicken/poultry farmers are women, because men usually perceive poultry farming as a minor activity for women and children, and not worthy of men's efforts.

Women therefore play a significant role in poultry keeping, and their poultry activities contribute directly to household food security and the well-being of children. However, current veterinary strategies and policies have not been designed with these stakeholders in mind. For example, while diseases can be highly damaging to smallholder assets, the process of controlling them can also inflict damage. The death or culling of large numbers of birds of indigenous breeds runs the risk of irrevocably losing an important genetic resource. Indigenous bird's performance can be improved by proper feeding, housing, medication and proper genetic selection.

4.1 Demographic characteristics of the respondents

4.1.1 Gender, age and marital statistics.

The majority of the respondents were males accounting for 55% of the sample, as compared to 45% females. The age characteristics indicated that the majority of the farmers were aged 30 – 50 years (60%).

Details are summarized in the table below:

Table 1: Age statistics of the respondents.

Age bracket	Frequency	Percentage (%)
20 -29 years	10	20
30 – 50 years	30	60
Over 5 years	10	20
Total	**50**	**100**

Source: Primary data

From the table, most of the farmers were aged 30 – 50 years accounting for 60%, followed by 20% aged 20 – 29 years and 20% aged over 50 years. The findings imply that poultry farmers are youthful. The main occupation of the respondents was farming (80%).

Data on marital status indicated that the majority of the interviewees are married (56%). Others were still single, while others were divorced and widowed, as shown in the table below:

Table 2: Marital status of the respondents

Marital status	Frequency	Percentage (%)
Single	10	20
Married	28	56
Divorced	5	10
Widowed	7	14
Total	**50**	**100**

Source: Primary data

As shown in the table, most respondents were married men and women accounting for 60%, 20% were singles, 14% widowed while only 10% were divorced. Data on the head of family shown that most families were headed by men (65%) and compared to 35% headed by women and the average family size was 5 people.

4.1.2 Education levels of the respondents

There was variation in education background, with the majority certificate holders (70%), others hold diplomas and degrees. Details are given in the table below:

Table 3: Education levels of the respondents.

Education	Frequency	Percentage (%)
Certificate	30	80
Diploma	15	15
Degree	5	05
Total	**50**	**100**

Source: Primary data

As evidenced from the table above, 80% of the interviewees hold certificates, 15% hold diplomas, while only 5% hold degrees. The researcher confirmed that the farmers hold some academic qualifications.

4.2 The status on the production of Indigenous chicken in Lwengo sub county

In trying to establish baseline data on the production of local chicken, the researcher sought for the type of poultry kept, the management systems used and the experience of the farmers by the respondents.

4.2.1Types of poultry raised

The majority (52%) raise local chicken, while others raise exotic and some few raise both breeds. More information follows in the table below:

Table 4: Type of poultry kept by the respondents.

Type	Frequency	Percentage (%)
Local	26	52
Exotic	15	30
Local and exotic	9	18
Total	**50**	**100**

Source: Primary data

The majority of the interviewees raise local chicken (52%), followed by 30% holding exotic chicken while only 18% hold both local and exotic chicken. This indicates that indigenous chicken production is high than exotic chicken.

4.2.3 Experience of the indigenous poultry farmers

Findings indicate that most farmers have been engaged in poultry farming for at least five years. Details are given in the table below:

Table 5: Farmers' experience in poultry farming

Number of years	Frequency	Percentage (%)
Less than 3 years	10	20
3 – 5 years	12	24
Over 5 years	28	56
Total	**50**	**100**

Source: Primary data

The majority of the interviewees (56%) have experience of over 5 years in poultry farming, followed by 24% with 3 – 5 years experience while only 20% had less than three years experience. The researcher confirmed that most of the farmers have vast experience in poultry. The researcher wished to establish how the birds are kept at night, how often cleaning is made, and the general care accorded to the birds. Responses to those questions are discussed.

4.3 Factors affecting the production of Local chicken

Study findings revealed that many factors affect the productivity of birds. These include inadequate food due to high costs, leading to low output, diseases, poor facilities for feeding, treatment among others.

4.3.1 Diseases outbreaks

Commonly occurring diseases were reported in several of the areas visited, and respondents identified the following NCD as a major disease and others reported, especially in Kito, included infectious bronchitis, fowlpox, and Gumboro. Farmers take several actions when there is a poultry disease outbreak. Respondents reported obtaining drugs from a private veterinary drug shop, vaccinating (after two months, for example), or using local herbal remedies. Household interviews on how community members deal with disease outbreaks found that most respondents sought veterinary advice, used local herbs, sold healthy birds and ate the sick birds themselves.

In trying to establish the effect of diseases on indigenous poultry, the researcher sought to find out whether the birds experienced serious diseases.

Majority of the respondents acknowledged that many diseases affect birds. More information is in the table below:

Table 6 : Responses on presence of diseases

View	Frequency	Percentage
Agreed	35	70
Disagreed	08	16
Not sure	07	13
Total	**50**	**100**

Source: Primary data

Most respondents (70%) agreed that many diseases affect poultry production in the area of study, 16% disagreed while 13% were not sure. Among the diseases cited include: chicken pox, new castle and coccidiosis among others.

According to the interviewees, whenever birds fall sick they are treated differently. Some farmers kill them, others call the veterinary doctors, others sell off, and others consume them while others treat by themselves, as seen in the table below:

Table 7: Treatment of birds that fall sick

Method	Frequency	Percentage
Treating by self	20	40
Treating by Veterinary doctor	10	20
Killing sick birds	6	12
Consuming sick birds	5	10
Selling sick birds	9	18
Total	**50**	**100**

Source: Primary data

The majority of the respondents (40%) asserted that they treat the sick birds locally by themselves, 20% invite veterinary doctors to treat their birds, 18% claimed that sick birds are

sold off immediately they are detected, 12% said sick birds are killed while 10% consume the sick birds.

Predators were also cited among the factors limiting the production of chicken in Lwengo Sub County, these include birds, thieves and
scavengers

4.3.2 Poor quality of feed given to the birds

Most of the interviewees (80%) accepted that they give supplementary feed to their birds; only 20% claimed they don't. The types of feed resources given to the poultry include grains, vegetables, oil seeds, minerals and vitamins among others. Details follow in the table below:

Table 8: Supplementary feed for birds

Feed	**Frequency**	**Percentage (%)**
Grains	25	50
Vegetables	10	20
Oil seed	8	16
Minerals	3	6
Vitamins	4	8
Total	**50**	**100**

Source: Primary data

From the table, it is evident that most farmers (50%) give grains as the supplementary feed for their birds, followed by 20% who use vegetables, 16% use oil seeds, 6% use minerals while 8% use vitamins. It was observed that the frequency of giving supplementary feed varies from person to person. Some give once a day, while others give twice or thrice a day. The majority (70%) asserted that they merely throw on the ground for collective feed, while 25% use containers to feed.

The 20% who claimed that they don't give supplementary feed to their birds, cited reasons why they fail to give. These include: lack of awareness, unavailability of the feeds because they are very expensive and the general lack of time to look after the birds.

It was also agreed that birds are allowed to scavenge and that they are given drinking water to ease on their digestion. The water is given to the birds using containers which are rarely washed;

this exposes the birds to diseases. The major sources of water given to the birds include: boreholes, wells, rain and river.

From the findings, the majority of the interviewees use borehole water for giving the birds, accounting for 60%, followed 20% use rain water while 10% and 8% use the well and river water respectively.

4.3.3 Poor Management systems

About the management systems used in poultry, findings indicate that most of the interviewees have adopted the semi intensive system. Details follow in the table below:

Table 9: Management systems used in poultry

System	Frequency	Percentage (%)
Extensive	10	20
Semi-intensive	16	42
Intensive	21	32
Others	2	4
Not sure	1	2
Total	**50**	**100**

Source: Primary data

Findings show that most interviewees apply semi intensive management system (42%), 32% use intensive, 20% extensive, while 4% use other systems. Only 2% were not sure. Based on the findings, bigger percentage poultry farmers are using semi intensive management system.

4.3.4 Lack of technical skills on culling

It was generally agreed that culling of birds is purposely done any time. The purposes cited include: consumption, sale and sacrifice. The birds to be culled are arrived at basing on their age, productivity and sickness. More information is given in the table below:

Table 10: Factors that determine birds to be culled

Reason	Frequency	Percentage (%)
Age	15	30
Productivity	28	56
Sickness	5	10
Others	2	4
Total	**50**	**100**

Source: Primary data

Most of the interviewees (56%) cited productivity as the key for deciding which birds to cull. The birds whose productivity is very low are immediately culled on detection. Another 30% base on the age of the birds. Old birds are culled, while 10% cited sickness and 2% gave other reasons such as sacrifice.

4.3.5 Poor Marketing information and facilities of indigenous birds

The age at which birds are marketed varies from farm to farm, depending on the breed and the feeding rate. Birds that are fed very well lay eggs and start laying early.

In trying to establish the marketing place for chicken, the following responses were gathered by the researcher:

Table 11: Marketing place for birds

Place for marketing	Frequency	Percentage
Home	14	28
Open market at Kyawagonya	30	60
Home and open place	6	12
Total	**50**	**100**

Source: Primary data

Most of the interviewees (60%), sell their birds through the open market, 28% sell their birds at home where by the sellers of birds in local markets purchase and take to their markets. Only 12% sell from home as well as in open market and the farmers are able to cater for domestic needs.

4.3.6 Poor marking prices and fluctuations

When asked about the challenges they encounter in marketing of their birds, respondents cited unstable prices, low prices, seasonality in demand, poor infrastructure and availability of substitutes among others.

Details in the table below:

Table 12: Challenges faced in marketing of birds

Challenge	Frequency	Percentage
Price fluctuations	14	28
Seasonality	20	40
Low prices	6	12
Poor infrastructures	5	10
Presence of substitutes	5	10
Total	**50**	**100**

Source: Primary data

Most of the interviewees acknowledged that seasonality is the biggest challenge to the marketing of birds. They argued that during calendar days such as Easter and Christmas, the demand for chicken is very high, while during off-season the demand is very low and offered prices are very low.

4.3.7 Factors identified by KIIs

The following are some of the factors that affect indigenous chicken production identified by FGDs and KIIs:

Inadequate feeds for poultry: When food for humans is scarce, chickens have less access to the food leftovers and residues that they usually eat.

Poultry today suffers from an inadequate supply of feed, which explains the increase in free-range poultry farming.

Conflicts with neighbors when chickens destroy crops, especially maize and beans force farmers to keep their chickens indoors (enclosed), and diseases spread faster when the birds are all kept together. Farmers also de-beak the chickens to stop them from destroying crops.

When birds destroy a crop, the owner of the crop usually tells the owner of the birds to tie them up; if she/he refuses, the crop owner may decide to hit or poison the birds.

Some respondents reported pride as one of the issues that can lead to conflict between neighbours in a community.

Some farmers do not keep their birds under control; as one respondent said, “In most cases, people who have poultry are proud and malicious people because when their birds destroy people’s crops; they shamelessly quarrel instead of being apologetic, which is so annoying. They keep quiet when you complain about their chickens and just look at you as a fool.”

Chicken surveillance: It was reported that chickens need surveillance to identify sick birds and isolate them from healthy ones.

FGD participants also noted a need for sensitization and training on poultry farming generally in order to recognize different disease symptoms.

Currently, people in villages watch what their neighbours do and copy it, regardless of whether the practice is good or bad.

The same occurs with buying chickens, when farmers see their neighbours’ and buy the same type of birds. Their main concern is to generate money without having to care for the birds. This problem is compounded by the lack of advisory services to inform people about best practices for chicken keeping. Farmers are not sure about the causes of disease, so diseases tend to take farmers by surprise.

Lack of money to buy drugs/medicine for chickens, especially for farmers with more than about 100 birds: The lack of drugs is very risky because every year disease outbreaks kill many birds, resulting in a need to restock.

The threat of theft and wild animals and birds eating chickens and chicks: Many thieves are people without work, who take advantage of other people’s chickens.

The need to lock birds inside during the planting and early germination period: This often deprives free-range birds of their food source, and may also aid the spread of diseases.

Lack of materials for constructing chicken houses: As it is difficult to build chicken houses, some households share their own homes with their birds, leading to human-to-bird or bird-to-human spread of diseases, such as influenza.

Expensive feeds: For commercial farmers, this reduces the profitability of chicken farming, especially as there is also a lack of sources of assistance, such as for borrowing money.

Lack of advice: Community members reported the general inefficiency of veterinarians, who are often not available when needed

This list indicates that there is a serious threat to poultry farming, as reported generally by the community members in the parishes visited.

4.4 Benefits from indigenous Chicken

4.4.1 Income price for birds sold at home

Birds sold at home go for different prices depending on the season, weight of the bird, need for quick money by the farmer or detection of diseases coming. The average income prices according to the respondents are given in the table below:

Table 13: Average income price for a bird sold at home

Price	**Frequency**	**Percentage**
10000 – 20,000	10	20
20001- 22,000	32	64
23,000 – above	5	10
Not sure	3	6
Total	**50**	**100**

Source: Primary data

As seen in the table above, the average income price at which the majority (64%) of the respondents sells their birds at home is between 12001 and 22000, followed by 20% who sell between 10.000 – 20.000, 10% sell above 23.000 while only 6% were not sure. The researcher confirmed that local birds fetch more income to the farmers. The average weight at which birds are sold is 1.8Kg – 3kg for both hens and cocks.

4.4.2 Profitability of poultry rearing

Most of the respondents agreed that poultry is one of the most viable ventures. They argued that birds fetch a lot of profits through the sale of eggs, hens and cocks. Cocks fetch the highest amount of money. The eggs for local chicken have a very high market compared to the exotic type.

As observed in the table above, the average price for a bird is very high.

In trying to assess the profitability of poultry farming, the researcher put the farmers to task to explain the average unit price of each of the products they sell in the open market.

Details follow in the table below:

Table 14: Showing the average unit prices

Type	Price	Frequency	Percentage
Small	15000- 20,000	20	40
Medium	23,000-24,000	20	40
Large	25001-28,000	10	20
Total		50	100

Source: Primary data

Data indicated that most of the farmers (80%) get price for small and medium sized birds. Only 20% obtain price for larger birds. Small birds are sold at 15000-20000 while the medium sized go for 23000-24000. The implication to the researcher is that most of the birds sold in the area are not large.

4.4.3 Household benefits of indigenous chicken

When asked how they use Indigenous chickens at the household level, respondents reported that chickens are used as food (soup), and any excess eggs and chicks are sold to cater for other domestic needs. Chickens are also exchanged for goats when a household has accumulated enough birds to move to a higher-value domestic animal.

It is clear that chickens are used in good and bad times. As reported by a key informant in Nkunyu parish, “Chickens help during good and bad times because they are the easiest [livestock] to use. When we are happy we use chickens, when in sorrow like death we also use chickens, and when the in-laws visit us, one has to slaughter chickens, especially if the in-law is a male.”

Table 15: Household Benefits from indigenous poultry.

Benefit /Asset	Frequency	Percentage
Food	35	35
House utensils	30	15
Education for children	24	10
Clothes	23	05
Medical treatment	08	04
Personal expenses	22	06
Bride price	40	08
Bicycle	08	06
House repair	09	10
Total		**100**

Source: Primary data

A FGD respondent in Nakyenyi believed that it is divine intervention that allows people to keep chickens: "It was God who created chicken for us. We poor cannot manage anything. When you are sick, sell chickens, when you are poor, you sell chickens. It was God who gave us chickens to solve our problems since we are poor."

An FGD respondent in Nkunyu noted that, "For me I think it's the size; for example, for chicken you just pick one and slaughter, which would not be logical for slaughtering a goat for one visitor." A female FGD respondent in Mayira "When a visitor comes, its chicken that can save you from embarrassment. Thus, a chicken is used when a visitor appears unexpectedly and when the household has nothing else to offer.

When a child falls sick, domestic birds are also the easiest item for a household to convert into financial capital to pay for treatment.

Household interview results indicated that most respondents sold poultry to obtain food or household items and consumables, such as pans, paraffin, children's school fees, clothing, medical and other personal expenses.

Table 15, which lists some possible benefits from poultry, shows that poultry is also occasionally used to buy household property, such as a bicycle. Most respondents perceived chickens as primarily a source of food.

Larger household expenditures such as bicycles, house repairs and family businesses are less frequently financed from the sale of poultry than smaller expenditures. This implies that poultry is not easily transformed into long-term family possessions, but instead helps solve urgent household needs as they arise, such as school fees and children's clothing.

4.4.4 Cultural beliefs, practices and traditions related to Indigenous Chicken.

Many of the cultural perceptions, practices and traditions associated with poultry may have positive or negative impacts on livelihoods. The majority of these cut across different tribes in the sub county, and the research for this study found that many of them are similar.

Respondents reported that many of these perceptions and practices have been carried through the generations to the present, such as certain cultural rites and ceremonies involving chickens.

Some respondents, especially the elderly, reported offering chickens to their ancestors for good and bad luck.

Chickens are also important in traditional ceremonies such as marriage and burials. For marriage ceremonies, chickens are particularly useful for paying the bride price.

Domestic birds are often used for time management. For example, chickens alert their owners when it is time to get up in the morning. When a household honours a visitor by killing a chicken, the gizzard is presented to the visitor as a sign that a bird is from the family's stock was slaughtered in his/her honour, and not purchased.

Owning chickens was also reported as a good thing for a household; a male FGD participant noted, "When they are moving around the home, they are just like flowers."

Chicken meat and eggs are perceived as healthy foods, and sick people are usually advised to eat eggs to regain their physical strength. People believe that healthy chicken meat will remain in the body for seven days after being eaten.

All these perceptions help to demonstrate the importance that communities attach to chicken raising, which is generally considered a social activity that every family ought to practice.

Respondents also reported that families owning chickens are perceived to be able to solve any problem, because the birds can easily be converted into money or physical capital by selling

chickens or eggs. In addition, it was reported that a household obtains money, easy meals for visitors, and supplements to their diets, and other benefits from poultry farming.

most respondents sought veterinary advice, used local herbs, sold healthy birds and ate the sick birds themselves.

Respondents reported increased use of herbal medicines for treating poultry diseases in rural areas. While many participants in the FGDs reported buying medicines from drug shops.

4.5 Ways of improving indigenous chicken production.

The following were strategies were identified by KII on how to improve Indigenous poultry production.

Proper breeding and management. Controlled free-range management is important to avoid inbreeding. A farmer who wants to succeed in indigenous chickens rearing has to combine both traditional and modern methods of indigenous chicken production. High quality breeds of hens or cocks with certain qualities such as high egg or meat production are crossed with the farmer's own (and less quality) stock can only be selected and for purposes of increasing egg production, then they can cross-breed with indigenous breeds with a light breed that have a history of good egg production. If farmers want to push for meat production, they can look for a heavy breed. Farmers, who want a breed that is both good for egg and meat production, can cross-breed their stock with a mixed breed. Apart from selecting good breeds, the quantity and quality of chicken feed matters since it contributes good production performance.

Record keeping is important since they help farmers to trace the lineage of each of their chicken selected for breeding in a way that can help them to analyze each of the breeds they have in their flock, including their performance, in terms of egg or meat production.

Establishment of mothering stocks/units in the sub county. The units can be source of improved chicks for rearing.

Training of farmers to ensure that they understand disease management is an essential step as it is very difficult to improve biosecurity practices if they do not believe that diseases are caused by infectious agents.

Formation of farmer groups or poultry clubs to enable effective extension service delivery and organization of group marketing domestically and regionally.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMEMDATIONS.

5.0 Introduction

This chapter involves the summary of the results presented in the previous chapter. It also presents the conclusion and recommendations for future action, in respect to the findings from the study area.

5.1 Summary of Results

5.1.1 Demographic characteristics of the respondents

The majority of the respondents were males with age characteristics ranging 30 – 50 years. Majority of the interviewees are married and most families were headed by men with average family size of 5 people and majority of respondents hold certificates of education.

5.1.2 Status on the production of indigenous chicken

The status indicated that majority of interviewees raise local chicken by using semi intensive system; supplementary feeding and most of them have rich experience of keeping local birds. Local materials are used in housing of poultry. Marketing for poultry is both domestic and regionally and the market prices range from 120000 –28000 depending on weight.

5.1.3 Benefits from indigenous poultry

The study found that most rural households keep poultry on a smallholder production as income sources to cater for domestic needs. Most of the respondents agreed that poultry is one of the most viable ventures. They argued that birds fetch a lot of profits through the sale of eggs, hens and cocks.

At the household level, respondents reported that chickens are used as food (soup), and any excess eggs and chicks are sold to cater for other domestic needs.

Farmers responded that there also cultural perceptions, practices and traditions associated with indigenous poultry that may have positive or negative impacts on livelihoods.

5.1.4 Major common diseases affecting indigenous chicken

The reported diseases affecting birds were NCD, Gumboro and fowl pox. Farmers take several actions when there is an outbreak. Respondents reported about obtaining drugs from a private veterinary drug shop in the area.

5.1.5 Factors affecting the production of indigenous chicken

The following are some of the many threats to indigenous chicken production identified by FGDs and KIIs, Inadequate feeds for poultry, Conflicts with neighbors when chickens destroy crops, Chicken surveillance to identify ill health birds, lack of adequate advisory information, Lack of capital for investment, lack of capital for investment, theft of birds, expensive feeds and among others and these indicated that there is a serious threat to indigenous poultry farming.

5.1.6 Ways of improving indigenous chicken.

FGDs and KII identified ways of improving Indigenous chicken which included, proper breeding and selection, proper feeding, appropriate housing, disease management and organization of groups/clubs for poultry farmers.

5.2 Conclusions

There are notable opportunities for indigenous poultry to continue flourishing in Lwengo Sub County because of the increasing trading centres with high population who demands for poultry products.

Formal local community organizations like Lwengo micro finance help to provide access to loan facilities. Through friendship and neighborhood networks, farmers have learned many things related to poultry farming, such as vaccination.

Most people keep chicken as a source of food. Others view poultry as an asset that can easily be transformed into long-term family possessions or used for emergency expenditures, such as school fees and children's clothing. Chickens are exchanged for goats when the household has accumulated enough birds to move to higher-value domestic animals.

Poultry has cultural significance within farmer's livelihoods, and this should be considered in any potential intervention strategy.

Domestic birds, especially chickens, are an important part of people's cultures, especially for marriage, burial and the naming of children. Chickens are considered a social bird or companion that every family ought to own.

The study noted that people have knowledge about poultry diseases and however, there is need for public education on the dangers of poultry disease outbreaks and the good practices that can minimize their effects, through posters, radio messages, information for local leaders, and more accessible veterinary services for rural farmers.

1.3 Recommendations.

Given the analysis and assessment of contributions of indigenous birds on farmer's livelihoods, the following recommendations are made.

The government and other NGOs should invest more resources in sensitizing the public about the contribution and benefits of raising poultry and they should also be trained on proper husbandry practices. Veterinary departments should institute good health practices such as quarantine to minimize the spread of diseases among birds.

To enhance the benefits of poultry in farmer's livelihoods in the sub county and the district at large, pilot interventions demonstration for cross breeding indigenous birds with superior quality breeds should be implemented and adapted in different parishes of the sub county.

There is need to introduce a multi-disciplinary approach to research on the role of poultry in farmer's livelihoods. With increased research funding, new and different ways and approaches on poultry farming as business might be developed.

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APPENDICES

Appendix I: Questionnaire for farmers.

Title of the study: Assessing the contributions of indigenous poultry production on farmers livelihoods in Lwengo sub county, Lwengo district

a. Name of a respondent…….. Sex ……..
b. Village of residence……
c. Age below 18 years……. Above 20years…… above 30years…… above 40years
d. Marital status single…….. Married…….. Cohabitating…….
e. Education level primary….. Secondary …….college ….. University …….

1 What are the types of poultry kept indigenous……. Exotic…..
2 Briefly explain the systems of management used in this village in rearing of indigenous chicken

a. Extensive
b. Intensive
c. Semi intensive

3 For how long have you been rearing indigenous chicken

a. 5 years
b. 10 years
c. 15years and above

4 Why do keep indigenous chicken and your farm?

a. Nutrition
b. Income through selling eggs or adult birds
c. Security as collaterals
d. Cultural purposes
e. Prestige and honour
f. For hobby purposes
g. For education
h. Don’t know

5 What are the factors affecting you in the production of indigenous chicken?

a. Limited capital
b. Take long to reach maturity

c. No markets for chicken in the area

d. Un reliable veterinary services

e. Insufficient advisory services

f. Conflicts among neigbours

g. Expensive balanced feeds

h. lack of superior breeds

i. don't know

6 How do you house your birds at night and what do you use to construct poultry structures

a. In our own houses

b. Separate house units/ thatched huts

c. In tree branches

7 Explain how you maintain hygiene and sanitation

a. washing drinkers every day

b. maintaining hygiene and sanitation of surroundings

c. cleaning of house units every day

8 How do you feed the birds and what kind of feeds do you provide to your chicken and how often?

a. Left over's

b. Kitchen refuse

c. Grains

d. Commercial feeds

e. Supplementary feeding

f. Don't know

9 Do you have markets available? Where?

a. Yes

b. No

c. Don't know

10 How much do you sell birds the small, medium and large size?

- Small size 1.3kgs?..... Medium size 2kgs?.....
- Large size 2.5kg?.....

Appendix II: Questionnaire for Key Informants
Title of the study: Assessing the contributions of indigenous poultry production on farmers livelihoods in Lwengo sub county, Lwengo district

1. Explain the factors affecting indigenous chicken production in Lwengo Sub County.

   …….
   ……..
   ……..
   ……..
   ……..
   ……..
   ……..
   ……

2. In your own opinion what should be done to improve production performance of indigenous chicken in your local community?

   ……..
   ……..
   ……..
   ……..
   ……..
   ……
   …….
   ……

3. What are the major contributions and benefits of indigenous chicken production in Lwengo Sub County?

   ……..
   ……..
   ……..
   ……..
   ……..
   ……..

4. Identify the major diseases affecting indigenous chicken and how are they controlled?

……..

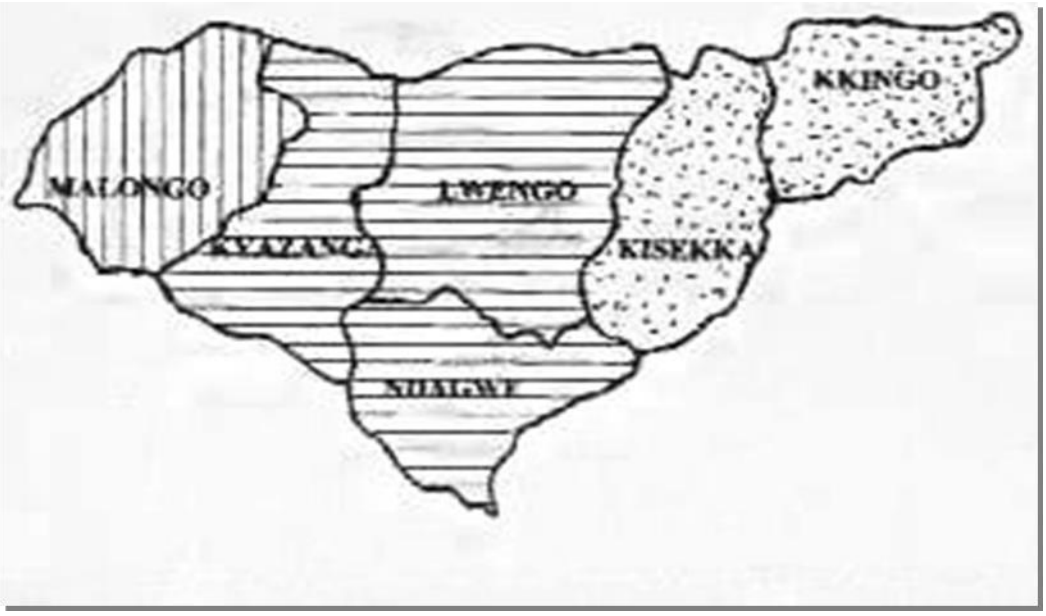
……..

……..

……..

…….

Appendix.III. Map of Lwengo District showing the location Lwengo Sub County



Source. Lwengo district map/Lwengo distinct documentations

Appendix IV. Implementation work plan and budget.

No	Activity	Time frame.	Resources needed.	Budget/UGX
1.	Submission of research proposal	July 2012	Stationery and Transport	65.000 UGX
2.	Submission of final proposal	July 2013	Stationery and Transport	72.000 UGX
3.	Field work/data collection	October /November 2013	Transport, stationery, accommodation	475.000 UGX
4.	Report work ,data analysis	November/December 2013	Stationery , personal utilities	184.000 UGX
5.	Submission of first draft report	February 2013	Stationery and Transport	123.000 UGX
6.	Submission of final Research report	April/July 2014	Stationery and Transport	280.000 UGX
TOTAL .				**1.130.000 UGX.**

Appendix V. Photographs showing indigenous chicken husbandry among some farmers. Me also taking part in vaccination of chicks.

 Chicken vaccination	 Chicken brooding.
 Chicken at marketing by road side	 Chicken handled for sale
 Chicken at marketing by road side kyawagony MARKET.	 Brooding

Appendix VI. Interview guide

Title of the study: Assessing the contributions of indigenous poultry production on farmers livelihoods in Lwengo sub county, Lwengo district

1. What is the status of indigenous chicken production in terms of the following?
a. Average number kept
b. Time to reach sales weight
c. Age at laying
d. Feeding standards

2. What are the constraints affecting indigenous chicken production?
3. What contributions results from rearing of indigenous chicken?
4. Explain the possible interventions to improve the performance of indigenous poultry production?
5. What are the major diseases affecting indigenous chicken?