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**THE GROWTH PERFORMANCES OF BROILER CHICKS RAISED ON BREWERS'
WASTE AS AN ALTERNATIVE SOURCE OF ENERGY, IN NAPAK DISTRICT**



BY

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BU/UG/2010/189

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

JUNE, 2014

DECLARATION

I, **Amodoi Josephine**, declare that this dissertation is original work and has not been submitted and presented for any academic award to any university or any other institution of learning.

Signature..... ..... Date..... 20th / 07 / 2014.....

APPROVAL

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DEDICATION

This report is highly dedicated to my dear husband Aleper Joseph and my children Longora Proscovia, Apio Mary V, Acen Jean G, Nangiro Barbra, Lomelu Samson, Lomelu Denis, Korobe Elijah and my friend Mukoya Agnes.

ACKNOWLEDGEMENT

My sincere appreciation go to the management of Busitema University Faculty of Agriculture and Animal Science Department of Animal Production and Management for allowing me carry my research in such a wonderful section of my program.

I also do extend my sincere thanks to my dear husband Mr. Aleper Joseph for funding my research and all that was required for its success.

Then I do thank the university supervisor Dr. Oluge for his upper hand in ensuring that the research was successfully done

I do thank the Lab Technician Mr. Muyinda Robert for the analysis of the experimental sample

I would like to acknowledge the community in particular Mr. Amudu James for his support of allowing me carry out my research in his place

Finally I do thank the assistants in the research Mr. Onyege Basil and Mr. Okiria Daniel for their support during feeding and weighing of the birds.

I would like to thank the staff of Busitema University in particular Mr. Musoba and Mr. William for their support in the purchase of the quality experimental materials like chicks brooders among others

TABLE OF CONTENTS

DECLARATION	i
APPROVAL	i
DEDICATION	ii
ACKNOWLEDGEMENT	iii
TABLE OF CONTENTS	iv
LIST OF TABLE	vii
LIST OF FIGURES	viii
LIST OF ABBREVIATIONS	ix
ABSTRACT	x
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background to the study	1
1.2 Research problem	2
1.3 General objective	3
1.4 Specific objectives	3
1.5 Research hypothesis	3
1.6 Significance of the study	3
1.7 Scope of the study	4
CHAPTER TWO	5
LITERATURE REVIEW	5
2.1 Introduction	5
2.1.1. Management of the broiler chicks	5
2.1.2. Sources of energy for broiler chicks	5

2.2 Nutritional requirement of the broilers -----	9
CHAPTER THREE -----	12
METHODS AND MATERIALS -----	12
3.1 Sample Determination resource equation method-----	12
3.2 Steps of the proximate analysis of brewers' waste:-----	13
3.2.1 Standardization -----	13
3.2.2 Data collection-----	14
3.2.3 Sampling technique -----	14
3.2.4 Data presentation:-----	14
3.2.5 Data analysis-----	14
3.2.6 Materials used in the study-----	14
3.3 Ethical consideration-----	16
3.4 Environmental considerations -----	16
CHAPTER FOUR -----	17
PRESENTATION OF RESULTS -----	17
CHAPTER 5-----	21
DISCUSSION OF RESULTS-----	21
CHAPTER 6-----	24
6.1 Conclusion-----	24
6.2 Recommendation -----	24
REFERENCES-----	25
APPENDICES -----	27
APPENDIX I THREE WEEKS DAILY WEIGHT DATA FOR BROILER CHICKS FED ON COMMERCIAL FEED (CONTROL GROUPS)-----	27

LIST OF TABLE

Table 1: Average weight gains of broiler chicks in the experimental and control groups 17

LIST OF FIGURES

Figure 1: Feeders with rectangular and round dishes were used for feeding the chicks.	15
Figure 2: Diagram of a drinker by (Eckeren <i>et al.</i> , 2006).....	15
Figure 3: Bar Chart Showing Weight Gains with age in the control and experimental broiler chicks	18
Figure 4: Line graph Showing Weight Gain with age in broilers chicks for the control and experiment groups.....	19
Figure 5: Pie Chart Showing Weight Gain with age in broilers chicks for the control and experiment groups.....	20

LIST OF ABBREVIATIONS

AGDP	Agriculture Gross Domestic Product
BSG	Brewers Spent Grains
BW	Brewer's Waste
CRM	Cassava Root Meal (CRM)
FAO	Food and Agricultural Organization
MAAIF	Ministry of Agriculture, Animal, Industry and Fisheries
MSBDG	Maize/Sorghum Brewers' Dried Grain
NARO	National Agricultural Research Organization
TCTA	Technical Centre for Agricultural and Rural Cooperation
UBOS	Uganda Bureau of Statistics
WHO	World Health Organization
NSP	Non soluble polysaccharide

ABSTRACT

The study was based on assessment of weight gain in broilers fed on the on – farm mixed ration containing brewers' waste as the major source of energy. The study sample was one hundred (100) day old broiler chicks. The experiment involved a control and an experimental group of chicks in Napak district

The control group (50 chicks) was raised on commercial feeds while the experimental group (50 chicks) was subjected to the feed containing brewers' waste. The on – farm mixed feed was composed of 51.5% brewers' waste, 5% silver fish, 29% soya beans, tony mix and 3% of grit mixture bone meal. The brewers' waste was derived from sorghum and maize which originated from Napak District in Karamoja for a period of twelve days

The brewers' waste was analyzed for proteins and carbohydrates contents using proximate method (qualitative test) and quantified using raw eggs and glucose standardization agents. The results indicated that there were no proteins, but it contained carbohydrates to the tune of 0.01 g in a measure of glucose standardization.

In this experiment it was observed the birds in the experimental group were comparable to those of the control group. Average weight gains in the two groups were assessed regularly. It was found out that the average weight gain in the control group was higher than that in the experimental group although all the birds continued to feed normally.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Cereals are important and common human food in the tropics. In Uganda, particularly Napak District in Karamoja, the major cereals grown include sorghum, maize, millet, bulrush which is draught resistant and adapted to the climate of the area. Asiedu, (2000) also observed that like in other parts of the tropics; cereals are used in various forms as human and animal feed. The by-products of the cereals include milling bran obtained after industrial processing and brewer's waste which are remains of the local brew.

The brewer's waste which is usually not put to any good use in Napak is discarded as garbage but scavenging chicken and other domestic animals tend to prefer feeding on it. According to Kyu *et al.* (1994), industrial brewers' waste in Korea is never wasted but fed to broiler, pigs and cattle.

The estimated world poultry population is about 16.2 billion, with 71.6 % in developing countries producing 67, 718,544 metric tons of chicken meat and 57,861,747 metric tons of hen eggs (Guèye, 2005). It was also estimated that in 1068 million households about 80 to 90% keep poultry (Kitalyi & Gueye, 1998).

The poultry industry in the country is currently composed of almost 40 million birds, of which the majority (87.7%) are indigenous chickens, Uganda Bureau of Statistics (UBOS 2010). The Eastern Region, where Napak is situated, had the highest share of nearly 7.4 million birds (37.3%) MAAIF, 2006.

The domestic livestock industry needs to be more efficient in using domestic raw materials such as brewers' waste in order to cut cost of production and increase productivity to meet the ever

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