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**COMPARING THE PERFORMANCE OF TWO WEEKS OLD BROILER  
CHICKEN ON MASH AND PELLETS**

BY

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A DISSERTATION SUBMITTED TO THE FACULTY OF AGRICULTURE AND  
ANIMAL SCIENCES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE  
AWARD OF A BACHELOR IN ANIMAL PRODUCTION AND MANAGEMENT OF  
BUSITEMA UNIVERSITY

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## DECLARATION

I **Oyungrwoth Jeremy** hereby declare that the information and data in this report is entirely my effort and has never been submitted for an award of a kind in any institution of learning.



Sign

17.08.2018

Date

This dissertation has been submitted with approval of;

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## DEDICATION

I would like to dedicate this report to my parents Okecha Solomon and Atizuyo Rosemary. Your guidance and input in this academic venture can only be rewarded by the almighty God.

## ACKNOWLEDGEMENT

I am grateful to the almighty God for the gift of life and good health through the course of this education venture. I wish to extend gratitude to my academic supervisor, Dr. Kisakye Hellen for the knowledge, guidance and support she offered to me during this research period. Last but not least, I wish to gratify my friends Bukenya Musoke Junior, and Mubarak Mohamed for the encouragement and support they showed me during this academic venture.

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## LIST OF ABBREVIATIONS

SRS	-	Simple Random Sampling
WHO	-	World Health Organization
NCD	-	New Castle Disease
CRD	-	Chronic Respiratory Disease
FCR	-	Feed Conversion Ratio
FCE	-	Feed Conversion Efficiency
FE	-	Feed Efficiency
FI	-	Feed intake
AFI	-	Average feed intake
LG	-	Local Government
NGO	-	Non - Government Organization
L%	-	Livability percentage
BPEI	-	Production Efficiency Index
ALWG	-	Daily Average Weight Gain
ALW	-	Average Live Weight
LW	-	Live weight
Kg	-	Kilograms
SDS	-	Sudden Death Syndrome
MI	-	mortality incidences
SPSS	-	Statistical Package for the Social Sciences
ANOVA	-	Analysis of Variance



## ABSTRACT

The aim of this study was to compare the performance of two week old broilers on mash and pellets in terms of feed conversion ratio, livability and Broiler production efficiency index. A completely randomized design was used with four treatments, 48 male white Cornish crosses were used, 12 in each treatment group. Treatments consisted of four nutrition plans A, B, C and D. All treatments consisted of pelleted feed for starter, treatment (A) had pelleted feed from grower through to finisher, treatment (B) had pelleted feed for grower and mash for finisher, treatment (C) had mash for grower and pellets for finisher while treatment (D) had mash from grower through to finisher. Both feed forms had the same nutrient composition for the respective feed regimes. Average live weight gain, feed intake, feed conversion ratio, feed conversion efficiency and mortality rate were determined at 7 day intervals from week 0 to week 6. Livability was determined at 2 week intervals during starter, grower and finisher feed regimes and production efficiency was determined at 6 weeks. This study showed that feed conversion efficiency was significantly higher with pellets compared to mash. Livability and production efficiency index did not differ significantly. The results of this study show that either mash or pellets can be used for optimum broiler production. This study suggests that recommendation of pellets or mash in broiler production should depend on farmer's ability to pay for the cost of either feed. Better marginal profits however may be achieved by using the cheapest available feed form in the market. Further studies are required to ascertain the higher feed conversion efficiency obtained from feeding both pellets and mash during grower and finisher stages in treatment (B and C) as seen in this study preferably with a larger population.

## CHAPTER ONE

### INTRODUCTION

Chapter one in this report elaborates the introduction, problem statement, objectives, hypothesis, significance, justification and scope of the study.

#### 1.1 Introduction

Poultry is kept in most areas of the world and provides an acceptable form of animal protein to most people. Intensively kept broiler chicken are seen as a way of rapidly increasing animal protein supplies for rapidly increasing urban populations. Broilers are relatively low priced, reproduce rapidly, and have a high rate of productivity (Jauro et al., 2014). Broiler production is carried out in all parts of the world with no known religious, social or cultural inhibitions associated with its consumption (FAO, 1999). Specifically, investment in broiler enterprises is attractive because the production cost per unit is low compared to other types of livestock, poultry meat is very tender and commonly used in ceremonies compared to other birds and broiler enterprises have short production cycle. Broiler production is characterized by high return due to its these short production cycle, as the production cycle of broiler takes 6-7 weeks, the production cycle of bovine takes from 3 to 12 months. Capital cycle is very rapid in broiler production as compared to the capital cycle in other types of animal production. The capital cycle can be repeated 6-7 times a year (Grepay, 2009). Owing to these obvious advantages of broiler poultry, a large number of farmers, men and women go into production, many of whom do so for income generation purposes as in (Emaikwu et al., 2010). However, a few major glitches truncated the growth path of the industry which was transiting from small-scale hybrid broilers and layers and backyard poultry enterprises/semi-commercial to medium scale commercial enterprises. Most importantly the very high input cost especially feed of broilers, which was recorded to constitute over 51% of total cost of production (Effiong & Onyenyeaku, 2006).

#### 1.2 Background

Broiler production like any other economic venture is dependent on resource inputs. As noted in (Ifeoma, 2015). Maximum poultry production depends partly on the environment, technical know-how and the quality of resources employed in the production process hence to optimize production and ensure sustainability, there is need for judicious management of the resources employed in the broiler enterprise. It is necessary to emphasize the significant volatility of the price of feed materials (Reztis

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