

EXPERIMENTAL STUDY OF THE DISTRIBUTION OF TRANSFERRIN GENOTYPES AND THEIR INFLUENCE ON THE GROWTH RATE OF ARBOR ACRE BROILER CHICKEN

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INTRODUCTION & AIMS



Growing demand for animal protein

Population increase has raised the demand for meat and eggs



Broiler Rapid Growth

Their rapid growth is traced to specialized animal husbandry techniques and rigorous breeding selection

Blood proteins

Infection defense and oxygen transport

Transferrin

An iron-transport blood protein

Aim

To determine the effects of each transferrin type on the growth rate

To provide information that will help breeders preserve genetic diversity and ensure adaptability and sustainability

MATERIALS & METHODS

Experimental Location

Private Research Farm and Biotechnology Laboratory of the Faculty of Agriculture, University of Ilorin, Nigeria

Birds

100 Arbor Acre broilers raised under uniform environmental conditions

Data Collection

Weekly recording of body weight and morphometric traits



Blood Sampling

2 ml of blood extracted per bird



Genotyping

Transferrin types identified using cellulose acetate electrophoresis procedures

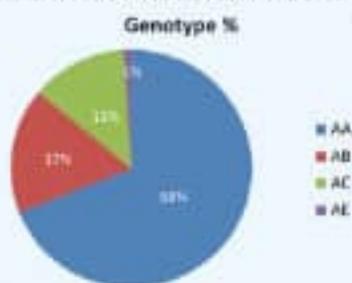
Statistical Analysis

Population parameters were estimated using Pop Gen 32.0

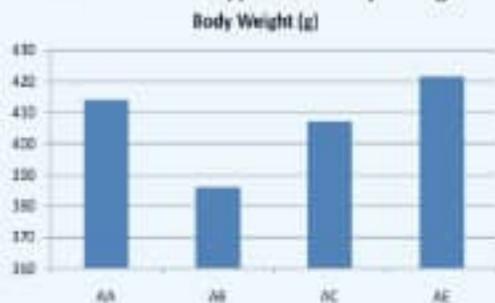
Correlation between transferrin type and growth was determined using SPSS version 22.0

RESULTS & DISCUSSION

Distribution of Transferrin Genotypes



Effect of Genotype on Body Weight



Genotypes and Traits Highly Affected

Genotype	Traits Highly Affected
AA	Neck circumference, Wing feather length, Body length
AB	-
AC	-
AE	Body weight, Toe length

CORRELATION BETWEEN TRANSFERRIN TYPES AND GROWTH

Positive correlation observed between transferrin genotypes and neck length, head length, and wing length.

ACKNOWLEDGEMENT

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