

ABSTRACT

This study was conducted to determine the growth patterns of the Kuchi ecotype of chicken in Kenya. Data was obtained from intensively reared Kuchi birds at Indigenous Chicken Improvement Programme (INCIP) facility at Egerton University. Gompertz's nonlinear growth model was fitted to the Kuchi longitudinal growth data to predict the live body weight at various age points and the growth curve parameters. Growth rate and maturity parameters for all ages were calculated using growth curve parameters. The inflection parameter including age at inflection (TI), body weight at inflection (BWI), and growth rate at inflection (GI) was also calculated using the growth curve parameters. Males had significantly ($P < 0.05$) higher body weight from week 14 to week 32, and absolute growth rate from week 12 to week 28 of age. Males were significantly ($P < 0.05$) superior to counterpart females in asymptote (A), body weight at inflection (BWI), and weight gain at inflection (GI). Females attained puberty earlier than counterpart males and from week 8 of age, females were more mature than males with significant difference ($P < 0.05$) in both degree of maturity (U) and absolute maturity rate (AMR). From the results of this study, it is recommendable to rear Kuchi males and females separately from the age of inflection (week 12) when they experience significantly different growth rates. Optimum feeding of Kuchi should be done at age of week 8 to week 14 when its growth rate is highest thus high feed conversion efficiency and consequently high-profit margin. Kuchi chickens were found to have slower juvenile growth and may not be the best ecotype of chicken for quick production of tender meat among the indigenous chicken ecotype found in Kenya

Keywords

Curve

Maturity

Parameter

Inflection point