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Feeding Response of African Giant Land Snail Fed Varying Levels of Ripe Eggplant Fruits Based Diets

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Abstract

An experiment was conducted to evaluate the performance of growing African giant land snails (*Archachatina marginata*) fed diets containing varying levels of ripe eggplant fruit (*Solanum aethiopicum*). Eighty four juvenile (four months old) snails were randomly divided into four treatments (21 snails each) and three replicates per treatment (7 snails each) in a completely randomized design (CRD). The treatments were assigned to one of four caloric (2.78 - 3.13 Mcal kg^{-1} ME) and nitrogenous (23.82 - 24.05 % crude protein, CP) diets containing 0, 5, 10, and 15 % of ripe eggplant fruits, respectively. Feed and water were offered *ad libitum* to the snails throughout the 12 weeks experimental period. Data were collected on growth performance (feed intake, body weight gain, shell length and circumference) and lipid profile. The results obtained showed no significant differences ($p > 0.05$) among treatments in the growth performance, low density lipoprotein and triglycerides of snails fed diets containing varying levels of ripe eggplant fruits. Total cholesterol decreased and high density lipoprotein increased significantly ($p < 0.05$) as the level of ripe eggplant fruits increased. Most consumers are scared of the cholesterol content of meat. The low cholesterol content of the snail fed with ripe egg plant fruit will make the meat from snail attractive to consumers especially the aged who are scared of cholesterol related illness. The addition of ripe eggplant fruits in the diets of *Archachatina marginata* in this study increased the high density lipoprotein of snail meat. High density lipoprotein is the 'good' type of cholesterol. It helps to remove excess cholesterol from the bloodstream and returns it to the liver where it is broken down and passed out of the body.

Keywords: Feeding, growth performance, processing

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