

EFFECTS OF *Xylopia aethiopica* FRUIT POWDER AS A FEED SUPPLEMENT ON THE GROWTH PERFORMANCE AND CARCASS CHARACTERISTICS OF THE JAPANESE QUAIL (*Coturnix japonica*)

H. Mohamadou¹, F. Djitie Kouatcho¹, Aboubakar¹, P.D. Mbougueng^{2*}, S.V. Mordjimbaye¹, A.N. Tangomo³, C. Pânzaru⁴, R.M. Radu-Rusu⁴

¹ Laboratory of Applied Zoology, Faculty of Sciences,
University of Ngaoundere, Cameroon

² National Higher School of Agro-Industrial Sciences,
University of Ngaoundere, Cameroon

³ Department of Sustainable Agriculture, Faculty of Sciences,
University of Garoua, Cameroon

⁴ Faculty of Food and Animal Sciences, "Ion Ionescu de la Brad" Iasi University of Life Sciences, 8 Mihail Sadoveanu Alley, 700489 Iasi, Romania
e-mail: pdes_mbougeung@yahoo.fr

Abstract

The present study sought to find out the suitability and efficacy of using *Xylopia aethiopica* fruit powder (XAFP) as a feed supplement on the growth and carcass characteristics of the Japanese quail (*Coturnix japonica*). A total of five dietary treatments groups were tested. The experimental treatments differed on the supplementation levels of XAFP. The experimental diets correspond to 0% (T0; control), 0.25% (T1), 0.50% (T2), 0.75% (T3) and 1% (T4) group. The diets were fed to a total of 150 quails of 21 days old and of comparable live weight. The quails were assigned to 15 batches of ten subjects of both sexes. The experimental units were randomly assigned to each cage. Each treatment was replicated three times in a completely randomized design. The quail growth traits and carcass characteristics were collected as an indicator of the suitability and efficacy of using XAFP as a feed supplement. Results revealed that a significant difference ($P \leq 0.05$) were detected in the FI, LW, WG FCR and Carcass yield between and among the treatment groups. Carcass yield had a significantly higher value ($73.26 \pm 0.26\text{g}$) in the T4 treatment. The supplementation of XAFP into quail diet led to a significant reduction in feed consumption and increasing the carcass weights of the Japanese quail. However, no significant differences ($P > 0.05$) were recorded in the proportions of liver, heart, kidney, gizzard, wings, neck, head, legs and testicle weight. *Xylopia aethiopica* fruit powder can be used up to 0.25% to reduce production costs.

Key words: Quail, supplementation, *Xylopia aethiopica*, growth, carcass
8 Mihail Sadoveanu Alley, 700489 Iasi, Romania