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Response of Grower Turkeys to Diets Containing *Moringa oleifera* Leaf Meal in a Tropical Environment

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Abstract

A seven-week study was conducted to evaluate the response of grower turkeys to varying dietary levels of *Moringa oleifera* leaf meal (MOLM) in a humid tropical environment. A total of 90 twelve weeks old male and female grower turkeys were randomly divided into five groups of 18 birds each in a completely randomised design (CRD) and assigned to five caloric (2.57 – 2.60 Mcal/kg ME) and isonitrogenous (19.95 % crude protein) diets containing five levels (0, 15, 20, 25 and 30 %) of MOLM, respectively. Each treatment was replicated three times with 6 birds per replicate housed in a deep litter pen of fresh wood shavings measuring 1.50m × 1.50m. Feed and water were provided to the birds ad libitum. Parameters measured were: final live weight (FLW) daily weight gain (DWG), daily feed intake (DFI), feed conversion ratio (FCR), protein efficiency ratio (PER), packed cell volume (PCV), haemoglobin concentration (Hb), red blood cell (RBC) count, white blood cell (WBC) count, mean cell volume (MCV), mean cell haemoglobin (MCH) and mean cell haemoglobin concentration (MCHC), feed cost / kg weight gain and apparent nutrient retention. Results showed that grower turkeys fed 20 % MOLM diet had significantly ($p < 0.05$) higher FLW and DWG values (4410.30 g and 34.49 g, respectively) and higher DM and NFE retention values (67.28 and 58.12 %, respectively) than turkeys fed other MOLM diets. Feed cost per kg gain decreased significantly ($p < 0.05$) with increasing levels of MOLM in the diets. The PCV, Hb, WBC, MCV, MCH and MCHC values of grower turkeys fed 20 % MOLM diet were significantly ($p < 0.05$) higher than those of grower turkeys fed other diets. It was concluded that a diet containing 20 % MOLM is adequate for the normal growth of grower turkeys in the tropics.

Keywords: Diets, grower turkeys, *Moringa oleifera* leaf meal, response