

Growth Performance, Nutrient Intake and Digestibility of Goats Fed Melon Husk and Palm Oil Slurry At 30% Inclusion Level

K. A. Sanwo, S. O. Iposu, A. O. Oso*, A. O. Fanimu and S. S. Abiola

Department of Animal Production and Health

Department of Animal Nutrition*

University of Agriculture, PMB 2240 Abeokuta, Nigeria



Abstract

A 126-day study was conducted to determine growth, nutrient intake and digestibility of West African Dwarf (WAD) goats fed melon husk (MH) and palm oil slurry (POS) as replacement for maize offal at 30% in concentrate diets. Sixteen goats weighing 6.5 – 7.0kg were randomly assigned to 4 dietary treatments at 4 replicates of each. Dietary treatments included control (Diet 1): 0% MH 0% POS; Diet 2: 30% MH 0% POS; Diet 3: 0% MH 30% POS; and Diet 4: 30% MH 30% POS; supplemented with Panicum maximum (grass). Data collected were statistically analysed and results showed that animals on control Diet (Diet 1) had the highest ($P < 0.05$) average daily weight gain of 31.57g/day, and a corresponding highest ($P < 0.05$) feed intake of 365.97g/day and best feed conversion ratio of 11.59. Animals fed Diet 3 had lowest ($P < 0.05$) average daily weight gain of 19.42g/day, with corresponding lowest ($P < 0.05$) dry matter intake of 334.94g/day and poor feed conversion ratio of 17.24, respectively. Variations in dry matter, organic matter and crude fibre (CF) intake were significant ($P < 0.05$). Crude protein (CP) intake decreased progressively from diet 1 to 4, but not significantly ($P > 0.05$). CF intake was highest in diet 4 (124.6g) and lowest in diet 1 (64.72g). Ether extract (52.80g), Ash (21.48g), Neutral detergent fibre (222.88g), and lignin (60.64g) were highest in diet 4. Dry matter digestibility was highest in animals on diet 2 (86.31%) and lowest in those on diet 4 (72.28%). It was evident that goats could be fed MH and POS at the inclusion levels adopted in this study except at 30% POS inclusion level at which growth was poorest.

Keywords: Growth Performance, Nutrient Intake, Digestibility of Goats, Fed Melon Husk and Palm Oil Slurry