**PERFORMANCE AND NUTRIENT DIGESTIBILITY OF RED SOKOTO BUCKS FED TWO FORMS OF THREE BROWSE PLANT LEAVES IN SHIKA, NIGERIA**

**By**

**IBRAHIM UMAR BELLO**

Department of Animal Science

Federal University, Kashere, Gombe State

**ABSTRACT**

A study was carried out to evaluate the performance and nutrient digestibility of Red Sokoto bucks fed unwilted and wilted leaves of three browse plant species, namely: Adenodolichos paniculatus, Ficus thnoningii and Gmelina arborea. A total of eighteen (18) Red Sokoto bucks of age nine to fifteen months weighing twenty one to twenty four kg were randomly allotted to six treatments with three bucks per group and fed the leaves of the three browse plants leaves for 56 days in a 3 x 2 factorial design. The performance parameters measured were; Initial body weight (kg), final body weight (Kg),daily feed intake (kg), total feed intake (Kg), daily weight gain (g), total weight gain (kg) and Feed conversion ratio. The nutrient digestibility parameters measured were; Dry matter, Crude protein, Crude fiber, Ether extract, nitrogen free extract, Acid detergent fiber and Neutral detergent fiber. nitrogen intake, Faecal nitrogen, Urinary nitrogen, nitrogen loss, nitrogen absorbed and nitrogen retained were as well determined. The experiment was conducted at National Animal Production Research Institute, (NAPRI) Shika, Zaria in the rainy season. Data collected at the end of the experiment were analyzed using the General Linear Model (GLM) Procedure of Statistical Analysis System. Treatment means were compared and separated using Duncan Multiple Range Test. Wilting was found not to increase weight gain in Gmelina arborea, but resulted in a weight loss (P<0.05) in Ficus thonningii, when compared with other treatments. The same result of weight losses were observed in both unwilted and wilted Adenodolichos paniculatus. Wilting was found to significantly (P<0.05) affect feed intake, weight gain/loss and feed conversion ratio. Wilting was found to positively influence (P<0.05) nutrient digestibility of all parameters in Ficus thoningii, but the reverse was the case with Gmelina arborea. Wilting was found not to influence (P>0.05) nitrogen intake in Gmelina arborea and Ficus thonningii, the same trend was observed with nitrogen absorbed. Feeding Adenodolichos paniculatus leaves resulted in a a lower feed intake (45.51 Kg) and higher loss in weight when (5.03 kg) comepared to other treatments. Higher feed intake was observed in F. thoningii and G. arborea (60.75 Kg) and a lowest weight loss was observed in Gmelina arborea (0.07 Kg). It is therefore concluded that the G. arborea was better consumed and gave the better performance than the rest of the treatments.

**INSTITUTION**: Ahmadu Bello University, Zaria

**SUPERVISORS:** 1. Prof. J.T. Amodu

2. Dr. R.J. Tanko

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