

## Applied Tropical Agriculture

### EFFECTS OF SUPPLEMENTATION OF GUINEA GRASS WITH CASSAVA LEAF SILAGE ON FEED INTAKE, DIGESTIBILITY AND NITROGEN BALANCE OF WEST AFRICAN DWARF GOATS

I. E. OLUWADAMILARE AND O. OLOWOFESO

Department of Agricultural Engineering Technology, Rufus Giwa Polytechnic, Owo, Ondo State, Nigeria

Department of Animal Production and Health, Federal University of Technology, P.M.B. 704, Akure, Nigeria

Email: [emmamary4five2007@yahoo.com](mailto:emmamary4five2007@yahoo.com)

#### Abstract

Silage prepared from wilted cassava leaves were fed to West African Dwarf (WAD) goats as supplement to Guinea grass (*Panicum maximum*) based diets to determine the effects on dry matter (DM) intake, digestibility, of nutrients and nitrogen balance of the animals. Twenty-four WAD goats were randomly assigned in group of 6 to 4 experimental diets. Diet 1, which was the control contained 100% *Panicum maximum* (PM), diet 2 contained 80% PM + 20% cassava leaf silage (CLS) while diets 3 and 4 contained 60% PM + 40% CLS and 40% PM + 60% CLS, respectively. Treatment effect on DM intake was not significant ( $p > 0.05$ ). The digestibility of dry matter and most of the nutrients was significantly increased ( $p < 0.05$ ) by the cassava leaf silage (CLS). Dry matter digestibility increased with increased level of cassava leaf silage. Diets 1 through 3 were not significantly different in crude protein digestibility (CPD), while diet 4 was significantly different ( $p < 0.05$ ) from the other diets in terms of CPD. Both the nitrogen balance and nitrogen retention were significantly influenced ( $p < 0.05$ ) by the treatments.

**Keywords:** Goats, cassava leaf silage, supplementation, N-balance, digestibility