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Nutritional Performance of West African Dwarf Goats Fed Wild Sunflower Leaf Meal Supplemented Diet

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Abstract

An experiment was conducted to investigate the effect of feeding wild sunflower (*Tithonia diversifolia*) as a dry season forage supplement on the growth and other nutritional parameters of West African Dwarf (WAD) goats, offered a basal guinea grass (*Panicum maximum*) diet.

Leafy portions and soft stems of wild sunflower forage was harvested, air-dried and ground in a hammer mill to produce a leaf meal. The wild sunflower leaf meal (WSLM) was incorporated into a concentrate diet as supplement to a basal guinea grass diet in the ratio 2:3.

Twenty WAD goats with age range of 5–7 months and with an average weight of 6.94 ± 0.37 kg, were randomly allotted to a soybean based concentrate diet containing maize, palm kernel cake, groundnut cake and bone meal in graded levels of 0, 10, 20 and 30 % levels of WSLM inclusion. The experiment lasted 16 weeks and parameters determined include feed intake, weight gain, digestibility, nitrogen utilisation and feed conversion ratio.

Results obtained indicate no significant difference ($p > 0.05$) in the dry matter intake (DMI), weight gain and dry matter digestibility of the goats on the different diets. However, the crude protein digestibility and nitrogen utilisation of goats on 0 % and 10 % WSLM inclusion were higher ($p < 0.05$) than those on 20 % and 30 % WSLM diet.

It can be concluded that wild sunflower leaf meal can serve as a forage supplement to the WAD goats up to 30 % level of inclusion without any deleterious effect.

Keywords: Digestibility, dry season, nitrogen utilisation, WAD goats