Tropentag, September 17-19, 2018, Ghent

"Global food security and food safety:
The role of universities"

Evaluation of Nutrient Content of *Alternanthera brasiliana* Processed Differently and Acceptability by West African Dwarf Sheep

Victor Akinwande, Adejoke Mako, Mariam Mustapha

Tai Solarin University of Education, Agricultural Science, Nigeria

Abstract

Agricultural activities from inception have always been focused on meeting family consumption demands. As the population of the world increased, agriculture moved from this subsistence level to commercialisation. Sad to say that with commercialisation of agriculture, a lot of countries are underdeveloped and still find it very difficult to feed their citizens. Hence agricultural modernisation for industrialisation is inevitable for food security. In the area of livestock production, new feeding strategies can improve and sustain production especially during dry season in the tropics when pastures are scarce and low in quality.

Silage is a method of preserving and sustaining nutritious pasture for ruminants to be consumed during the dry season. *Alternanthera brasiliana* (AB) is a perennial herb that is available all seasons and can serve as fodder for livestock. Therefore, this study was designed to assess the nutrient and anti-nutrient content of differently processed AB (fresh, ensiled and sun-cured) and compare the preference of each form of AB by West African Dwarf (WAD) sheep.

Result revealed that processing influenced the chemical composition (%) significantly ($p < 0.05$). The dry matter (DM) ranged from 21.01–90.89 % in fresh and sun-cured forms of AB respectively. The crude protein (CP) values for sun-cured, ensiled and fresh AB are 13.93 %, 17.93 % and 22.53 % respectively. It was observed that processing improved the DM of the plant. All minerals and anti nutrients analysed were not significantly different, but all are within recommended level for consumption. The coefficient of preference (CoP) ranged from 0.21–2.60 in sun-cured and ensiled forms respectively. Judging by the CoP the fresh and ensiled forms were acceptable to the animals, while the sun-cured form was rejected. However the ensiled form of AB was most preferred.

It can be concluded that ensiling improved the daily intake of AB. Hence, ensiling of AB can be modernized to improve ruminant production in the tropics, hence eliminating global food shortage.

Keywords: Acceptability, Alternanthera brasiliana, nutrient content, silage, sun-cured, WAD sheep

Contact Address: Victor Akinwande, Tai Solarin University of Education, Agricultural Science, Ijebu-Ode, Nigeria, e-mail: olusegun.akinwande@yahoo.com