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“Development on the margin”

## Effect of Fungal Treated Maize Cob on the Performance of West African Dwarf Rams

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### Abstract

Maize cobs (MC) are potential feed resources for ruminants if properly harnessed. Their uses are however limited by high fibre content and low digestibility which can be enhanced by fungal degradation. This study aims at assessing the nutritive value of biodegraded maize cob fed to West African Dwarf (WAD) rams. MC were degraded for 40 days on a large scale with the edible mushroom: *Pleurotus tuber-regium* (PT). Twenty rams were allotted to five groups of four rams per treatment in a completely randomised design. Each group was fed any of the diets in which MC treated PT replaced wheat offal in g per 100 g at 0 (A), 25 (B), 50 (C), 75 (D) 100 (E) as supplement to basal diet of *Panicum maximum*. The experiment lasted for 114 days. Parameters measured were voluntary dry matter intake (VDMI), average daily weight gain (ADWG), feed conversion ratio (FCR), nitrogen balance, ruminal pH (pH), total volatile fatty acids (TVFA's) and ammonia nitrogen (NH<sub>3</sub>-N) and apparent digestibility. Significant variation was observed in VDMI. The ADWG recorded for rams ranged (g/d) from 67.73 for rams on control diet A to 70.94 in diet E. Treatment effect recorded for FCR and pH were significant. The TVFA's (meq l<sup>-1</sup>) increased from 10.1 in diet A to 12.8 for diet E. The NH<sub>3</sub>-N (mg l<sup>-1</sup>) increased from 18.2 to 26.40 in diet A and E respectively.

Inclusion of maize cob treated with *Pleurotus tuber-regium* in the diet of rams improved the voluntary feed intake and digestibility. The biodegraded MC can completely replace wheat offal in the diet of West African dwarf rams.

**Keywords:** Edible-mushroom, fungal degradation, ram, ruminants