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“Development on the margin”

Intake and Digestibility of Elephant Grass Ensiled with Cassava Peels by Red Sokoto Goats

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Abstract

The nutritive value of elephant grass (*Pennisetum purpureum*) ensiled with varying proportions of cassava peel (0, 10, 30 and 50%, wet basis) as dry season feed for goats was estimated in a laboratory and digestibility study using Red Sokoto goats. Elephant grass was cut at 12 weeks of age and chopped to approximately 3 cm length and mixed with chopped cassava peel (3 cm length) in the specified proportions. At 21 days of ensiling, the silages were examined for physical properties, pH and proximate composition. Intake and digestibility of silage mixtures were also measured using twelve goats housed in individual pens with slatted floors adapted for faecal collection. Results show that pH and physical characteristics of all the silages were within acceptable range. The appearance, smell and texture of the composite silage improved with increasing level of cassava peel in the mixture. The pH of the silage ranged from 3.75 to 4.70 and reduced with higher inclusion of cassava peel in the mixture. Dry matter (DM) intake of the goats increased significantly ($p < 0.05$) as proportion of cassava peel in the silage increased while DM digestibility of the silage also improved. DM intake of goats in this study was 2.55, 2.68, 2.92 and 3.09 % of body weight while DM digestibility was 54.7, 56.7, 64.3 and 68.0 % for 0, 10, 30 and 50 % inclusion levels of cassava peel in the grass silage respectively. These results show that addition of cassava peel to elephant grass improved the physical attributes of the silage and its nutritive value for goats.

Keywords: Cassava peel, digestibility, elephant grass, goats, intake, silage