

The feeding value of moringa (*Moringa oleifera*) foliage as replacement to conventional concentrate diet in Bengal goats

ABSTRACT

A mixed concentrate diet was replaced by graded levels of dried moringa foliage in growing Black Bengal goats and dry matter intake, digestibility and nutrient utilization and the growth performances were determined. Thirty growing male goats were divided into five groups with six animals in each group. The five dietary treatments consisted of varying proportions of moringa foliage (MF) and concentrate (C), namely, T1 (100MF: 0C), T2 (75MF:25C), T3 (50MF:50C), T4 (25MF: 75C) and T5 (0MF:100C). The experiment was arranged in completely randomized design. All the five diets contain similar level of crude protein (average CP $18.3\pm 0.09\%$) and metabolizable energy (average ME 10.96 ± 0.19). The intake of dry matter and CP of goats on diet T1 (100% moringa) differed significantly ($p < 0.01$) from that of T5 (100% concentrate) diet. ADF intake was increased with the increasing level of moringa foliage, similarly the digestibility of ADF was increased significantly ($p < 0.01$) with increasing level of moringa foliage. The digestibility of other nutrients did not vary significantly ($p > 0.05$) among the diets. Nitrogen retention was significantly higher ($P < 0.01$) in goats fed with T1, T2 or T3 diet than those fed with T4 or T5 diet. Highest average daily live weight gain was found in goats fed with T2 diet while the lowest ($P < 0.05$) was found in goats fed with T5 diet. It was concluded that moringa foliage may be a replacer of conventionally mixed concentrate for feeding Bengal male goats.

Keyword: Bengal goats; Body weight; Concentrate; Moringa foliage; Nutrients intake