Summary

A feeding trial, conducted in the piedmont of Colombia's Eastern Plains, aimed to determine leaf forage quality of the tree *Trichanthera gigantea*. It also evaluated the effect of three levels of supplementation with fresh *T. gigantea* foliage on feed intake and digestibility of six African-type sheep fed a basal diet of mature *Dichanthium aristatum* hay. Supplementation levels were 0%, 20%, and 40% of dietary dry matter (DM). Animals were arranged in a replicated 3 x 3 Latin square design. Leaves of *T. gigantea* presented high forage quality in terms of crude protein (CP) content (18.6%) and rumen degradability at 48 h (73.5%), as well as essential minerals (P = 0.25%, Ca = 2.45%, K = 2.18%, Mg = 0.69%, S = 1.75%, Zn = 41 ppm, and Cu = 17 ppm). Supplementation with 20% *T. gigantea* leaves significantly increased ($P < 0.05$) total intake of all forage components under study (DM, organic matter (OM), CP, neutral detergent fiber (NDF), and acid detergent fiber (ADF). Dry matter intake increased from 53.8 g/kg metabolic body weight (MBW) in animals without supplementation to 71.1 g/kg MBW in animals supplemented with 20% *T. gigantea*. Total CP intake increased from 2.3 g/kg MBW to 5.6 g/kg MBW. Supplementation with 40% *T. gigantea* did not result in further increases in total intake of DM, OM, and NDF. Crude protein and ADF intake, however, were significantly increased to 7.8 and 29.3 g/kg MBW, respectively, in animals supplemented with 40% *T. gigantea*, as compared with those receiving 20% *T. gigantea* in their diets ($P < 0.05$). Supplementation with 20% *T. gigantea* increased ($P < 0.05$) apparent in vivo digestibility of DM, OM, CP, NDF, and ADF. Dry matter digestibility increased from 54.7% to 62.4%, and CP digestibility from 22.8% to 55.2%. Supplementation with 40% *T. gigantea* had no further effect on apparent in vivo digestibility of any forage component. These results clearly show that providing supplements of low-quality grass hay with *T. gigantea* greatly increased forage intake and digestibility. The foliage of *T. gigantea* is therefore a highly suitable forage for ruminant nutrition which helps mitigate nitrogen and mineral deficiencies. Results also suggest that 20% *T. gigantea* is sufficient to improve forage intake and digestibility.