

Summary

In El Hatico natural reserve, located in the Department of Valle del Cauca, Colombia, the voluntary consumption of DM was evaluated over 1 year in a silvipastoral system consisting of *Cynodon plectostachyus*/*Leucaena leucocephala* pasture and *Prosopis juliflora* trees. Measurements were made at 42-day intervals and a split-plot design with four replicates was used, in which the main plots corresponded to periods of the year and subplots to the type of association. Consumption of *L. leucocephala* was measured in a randomized complete block design in which the differences between times of the year were evaluated. In addition, the digestibility and availability of each forage vs. consumption were submitted to multiple regression analysis, and the effect of adding molasses was compared. It was concluded that silvipastoral systems similar to the one used in this study can yield an average DM consumption of 9.5 kg/animal per day (7.7 kg of *C. plectostachyus* and 1.8 kg of *L. leucocephala*), without considering the possible consumption of *P. juliflora* pods during tree harvests. The maximum inclusion of *L. leucocephala* in the diet (29.1%) did not cause apparent toxicity problems for the animals. Voluntary forage consumption differed between periods ($P < 0.05$), being influenced by factors such as IVDMD, forage availability, and inclusion of molasses in the diet. Plant height of *L. leucocephala* and the rainy season also affected these differences. Grass consumption also differed ($P < 0.05$) between associations, being higher in the case of *L. leucocephala* than in *P. juliflora*.