

Summary

Fifty two *Panicum maximum* ecotypes were evaluated on an Inceptisol of the "Los Diamantes" experimental station (10° 13' N, 83° 47' W; 250 m.a.s.l., tropical rain forest) of the Costa Rican Ministry of Agriculture and Cattle Farming, between October 1987 and September 1988. These evaluations, to measure adaptation of the ecotypes in the area, included dry matter (DM) production, crude protein (CP) content, in vitro DM digestibility (IVDMD), and pest and disease tolerance. Vegetative material (roots) of the ecotypes was planted at a distance of 1 x 2 m, at the rate of 6 plants/plot, and laid out in randomized blocks with two replications. Evaluations were made every 4 weeks by utilizing the F test and cluster analysis to group the ecotypes according to their characteristics.

Differences ($P < 0.01$) were found in all the ecotypes for the characteristics evaluated. DM production varied between 0.66 and 4.38 t/ha; the leaf/stalk relationship varied between 0.4 and 5.5 g/g, with this relationship being greater in *P. maximum* CIAT 6969, 16020, 16051, 16061, and 16028. The highest values of CP, in parentheses, were presented by *P. maximum* CIAT 6180 (21.34%), 6114 (20.8%), and 6554 (20.5%). IVDMD varied between 56% and 70% in the leaves and between 46% and 71% in the

stems. Leaf spot (*Cercospora fusimaculans*) attacked 23% of the ecotypes.

According to the cluster analysis, the most promising ecotypes for the area are: *P. maximum* CIAT 6299, 6868, 6923, 6969, 16011, 16028, 16020, 16051, 16061, and 16062.