Summary

In an Ultisol at the ICA-Macagual research center, Colombia (01° 37' N, 75° 36' W; 3600 mm; 26 °C; 260 m.a.s.l.), between June and December 1988, the effect of two planting distances between rows (0.4 m and 0.8 m) was evaluated, along with three distributions: one row of grass/one row of legume (1:1), two rows of grass/two rows of legume (2:2), and one row of grass/two rows of legume (1:2) in the establishment of *Brachiaria decumbens* CIAT 606, *B. dictyoneura* CIAT 6233, and *B. humidicola* CIAT 6013, associated with each one of the legumes *Centrosema macrocarpum* CIAT 5713, *Arachis pintoi* CIAT 17434, and *Desmodium ovalifolium* CIAT 350.

Twenty weeks after planting, soil cover for both planting distances was similar. The percentage of grass was higher for the planting distributions 1:1 and 2:2. *Brachiaria decumbens* was the grass with the fastest establishment. At the same age, the most productive associations were *B. decumbens-C. macrocarpum* (4.9 t/ha of DM) and *B. decumbens-A. pintoi* (5.1 t/ha of DM). Legume presence improved the pastures' nutritional quality.