

Summary

On an Oxisol, at the Macagual Research Center of the Colombian Agricultural Research Corporation

(Corpoica), located in a tropical humid forest environment in the Amazonian piedmont, 22 km south of Florencia, Department of Caquetá (Colombia) at 75° W longitude and 1° 4' N latitude at 350 masl, 3,600 mm average annual precipitation, 26 °C average temperature, and 85% relative humidity, were evaluated 21 accessions and hybrids of *Brachiaria* (14 *B. brizantha*, two each of *B. humidicola* and *B. decumbens*, and one *B. ruziziensis*). A randomized complete block design was used with 21 accessions (entries) and three replications. The *Brachiaria* lines were established from direct sown seed at 50 cm in 5-m-long rows, 1 m apart. The experimental unit was a 3 x 7 plot (including borders). The results show highly significant differences ($P < 0.01$) among species and accessions in terms of DM production (in 11 harvests every 42 days), in plant height, in percent ground cover, and in leaf:stem ratio. DM production was inversely correlated ($r = -0.70$) with precipitation during the growth period immediately prior to harvest. During the first growth period, an increase in spittlebug nymphs was documented, coinciding with the period of greatest rainfall. This insect attack affected all entries with damage ranging from light to moderate. Damage was related ($r = 0.93$) to the number of nymphs in the plot. *Brachiaria brizantha* CIAT 26110 is the most promising accession to advance to grazing trials.