

Summary

Live weight (LW) gain of Zebu steers (275 kg initial LW), submitted to alternate grazing of *Brachiaria decumbens*,

was determined at the Macagual Research Center in Florencia (Caquetá, Colombia), located at 1° 4' N and 75° 31' W. Three stocking rates were used (2.0, 2.5, and 3.0 steers/ha), in three 1-year grazing cycles. Each 2-ha pasture was divided in half and grazed alternately at 35-day intervals. Animals were weighed separately at 60-day intervals, without previous fast, and the slopes of weight curves were submitted to analysis of variance. A completely randomized design, without replicates, was used. Sources of variation were animals and stocking rates and, within stocking rates, animals were considered as source of error. LW gains were higher ($P < 0.05$) during the first year (533 g/animal per day), compared with the second (406 g/animal per day) and third years (383 g/animal per day). No effect of stocking rate ($P < 0.05$) was observed. Average LW gain/animal per year was 150 kg. Average values found in 11 samples of *B. decumbens* were 5.69% for crude protein content; 38.2% for acid detergent fiber; and 64.2% for true in vitro dry matter digestibility. Pastures were only used 63% of the time because of constant spittlebug attacks.