Summary

A study was conducted at CORPOICA's Macagual Research Center, located in Florencia, Caquetá, Colombia, to determine the milk production capacity of native pastures, *Brachiaria decumbens* alone and *B. decumbens* in association with legumes, under grazing. The Center is located at 1° 37' North latitude and 75° 31' West longitude, within the tropical rain forest ecosystem. Nine red Holstein x Zebu cows of second and third calvings and between 60 and 90 days of lactation were used in a 3 x 3 Latin square design, with three replicates. Groups of three cows each were rotated among the three pastures at 21-day intervals. Individual milk production data of the last 14 days of each period was used for statistical analyses. The calculated stocking rate was 1.0, 1.5, and 2.0 animal

units (AU) per hectare (1 AU = 400 kg live weight) for the native pasture, *B. decumbens* and the association, respectively. Average green, dry matter availability was 4504 kg for the native pasture, 4506 kg for *B. decumbens* alone, and 3844 kg for the association. Hand-plucked samples presented average crude protein and in vitro dry matter digestibility values of 7.1% and 48% for the native pasture, 5.4% and 58% for *B. decumbens* alone, and 5.7% and 56% for the association. No significant differences ($P > 0.05$) were found in milk production among pastures (l/cow: 6.86 for the native pasture, 7.00 for *B. decumbens* alone and 6.73 for the association). The calculated milk production per hectare was 23% higher in the association compared with *B. decumbens* and 52% higher in *B. decumbens* alone compared with the native pasture. Milk fat content was higher ($P < 0.05$) in the association (3.94%) than in the native pasture (3.73%) or in *B. decumbens* alone (3.53%). On average, during the time spent grazing the native pasture, the cows gained 10.9 kg compared with a loss of 10.1 and 1.6 kg ($P < 0.001$) when grazing *B. decumbens* alone or the association, respectively. Conversely, the calves gained an average of 7.4, 7.8, and 8.6 kg ($P > 0.05$) when their mothers were grazing the native pasture, *B. decumbens* alone or the association, respectively. Milk production can therefore be improved in the Caquetá region by introducing *B. decumbens* and forage legumes, as compared with native pastures, mainly because of an increased carrying capacity. Adjustments, however, must be made depending on forage availability if the proportion of the species in the pasture is be maintained and pasture stability and persistence kept.