

# Summary

The effect of grazing animals on some soil physical properties was measured at the Centro de Investigaciones ICA-Macagual (piedmont of Caquetá), at 1° 37' N and 75° 36' W, within the tropical rain forest ecosystem. Measurements were made on geomorphological positions of slightly hilly areas (clay Typic Hapludult), low terrace (clay Typic Dystropept), and valley plain (clay-loam-silt Fluvaquentic Dystropept), with *Homolepis aturensis* and *Brachiaria decumbens* pastures grazed for 10 years. Measurements were also made for native forest.

Animal trampling modifies soil physical characteristics. In clay soils, compaction was greater, and in some cases soil loss occurred in the first 15 cm. The apparent density increased as soil depth increased, independently from the geomorphological position, which decreases internal movement of water in the soil. These changes were more drastic in *H. aturensis*. To the contrary, *B. decumbens* improved soil filtration because of a better structure and distribution of macroporosity.

The results suggest that in the piedmont of Caquetá, Colombia, cattle raising should be done

with improved species that favor the existing soil structure.