

# Summary

On a sandy loam Ultisol, since 1980 at the San Ramón Experiment Station (humid tropical forest), Loreto, Peru, pasture productivity has been evaluated in: *Centrosema pubescens* CIAT 438, *Brachiaria humidicola*-*Desmodium ovalifolium*, *B. decumbens*-*D. ovalifolium*, *Andropogon gayanus*-*Stylosanthes guianensis*, and *A. gayanus*-*C. macrocarpum*.

Some measurements of these pastures were taken after five years to determine the effect of grazing animals on the physical properties of the

soil. It was found that (1) The infiltration rate was greater in the crown area of the soil under *A. gayanus* plants ( $>16.5$  cm/hour) than among the grass plants (3.2 cm/hour), where animals normally walk. (2) Conical resistance of the soil under associations was greater than that of the soil under forest, but less than that under overgrazed native pasture. (3) The apparent density in the first 10 cm of the soil increased 17.5%, on average, in the soil under associated pastures, and 29.1% under native pasture in relation to the secondary forest. The results show that animals grazing on humid tropical forest soils reduce the infiltration rate and increase the apparent density.