

## Summary

The effect of three growth rates, similar to those normally observed in savanna-raised animals, on the age and weight at puberty of Zebu heifers was studied. A grazing trial was conducted in the ICA-CIAT station in Colombia (4°34'N, 71° 29'W and 150 m.a.s.l.). Stocking rates of 1.72, 2.30, and 3.23 animals/ha were applied to a *B. humidicola* CIAT 679/*M. minutiflora*/*D. ovalifolium* CIAT 350 pasture. These resulted in liveweight gains of 311, 220 and 17 g/d, respectively. Availability of forage decreased with increasing stocking rates, whereas the crude protein content of each of the species decreased with increasing time at the low stocking rate. On the other hand, at the highest stocking rate, forage quality tended to increase with time. Nevertheless, heifers on the latter treatment did not reach the target weight of 270 kg during the experimental period, and there was evidence of severe undernutrition, which resulted in low levels of serum protein. The latter syndrome has also been observed in animals grazing savanna. Age at puberty, as indicated by manifestation of estrous, increased with decreasing growth rates; at the lowest stocking rate, puberty occurred at 793 days of age and a liveweight of 268 kg. In the medium and high stocking rate, puberty took place at 824 d and 249 kg, and 915 d and 205 kg respectively. Thus, there was limited evidence of a compensatory effect, whereby increasing ages at puberty tend to overcome the effects of low liveweights.