Summary

In an Ultisol of the Centro de Investigación, Enseñanza y Extensión en Ganadería Tropical (CIEEGT) of the Universidad Nacional Autónoma de México, located in Veracruz (20° 04' N, 97° 03' W, 150 m.a.s.l.), seasonal liveweight gain of Holstein-zebu and Brown Swiss-zebu steers was determined in native pastures of *Paspalum* spp. and *Axonopus* spp., alone and associated with *Neonotonia wightii* and *Macrotyloma axilare*, and in *Pennisetum purpureum* pastures. These pastures received 26 kg/ha of P at planting and 80 kg/ha of N each year, and were used with 14 days of occupation and 28 days of rest.

Available forage was higher in *P. purpureum* pastures (5.9 t/ha) than in the native pastures (2.8 t/ha) and in the associations (2.7 t/ha). In the first two grazing periods, the highest

liveweight gain per hectare (> 400 kg) was obtained in the *P. purpureum* pastures. But this diminished in the following two periods as a consequence of adverse climatic conditions and a pest attack in the *P. purpureum* pastures. The results of the study make it possible to conclude that *P. purpureum* has a seasonal DM production. However, in short grazing periods, it is possible to obtain production higher than that obtained with the native pastures of the region, and even superior to that obtained with the native pastures associated with *N. wightii* or *M. axilare*.