

Summary

The response of two *Centrosema* species to three *Rhizobium* strains (CIAT-49, 3101, 3894) was studied under rustic greenhouse conditions at the Chetumal Agriculture Experiment Station in the state of Quintana Roo, Mexico. An uninoculated check, without nitrogen, was used. *Centrosema* species were planted in PVC cylinders using undisturbed soil samples of two types, with high grazing potential: Rendzinas (pH 6.6, 5.38% OM, 0.27% N) and Gleyics (pH 7.2,

3.29% OM, 0.164% N). Phosphorus (50 kg/ha) and minor elements (10 kg/ha) were applied to all treatments; soil was kept at field water capacity for 9 weeks. Treatments were arranged in a completely randomized 2 x 2 x 5 factorial design, and results were submitted to variance analysis and significance tests (Tukey 0.05). Leaf dry matter was highest in *C. macrocarpum* planted on Rendzinas without nitrogen and inoculation. Root dry matter was highest in *C. pubescens* planted on Rendzinas and inoculated with *Bradyrhizobium* strain CIAT 49. The number of nodules of *Bradyrhizobium* strain CIAT 3101 was similar for *C. macrocarpum* in Gleyic soils (5.6) and *C. macrocarpum* in Rendzinas (5.5).