

## Summary

At the experimental farm Costa de Chiapas, Mexico, symbiosis of introduced and native strains of *Bradyrhizobium* and its effect on DM production of plant parts and the whole plant of *Centrosema brasilianum* CIAT 5234, *Pueraria phaseoloides* CIAT 9900, *C. macrocarpum* CIAT 5065, and *C. pubescens* CIAT 438 as well as the number of nodes, were evaluated at nine weeks. An undisturbed sandy soil was used with pH = 5.7, 2.6% MO, 0.16% N, and 3.2 ppm of P. At planting, 50 kg/ha of P and 0.1 g/cylinder of inoculant in a peat medium were applied. A treatment consisting of the application of 100 kg/ha of N, divided into five applications, was included. The treatments were dispersed in random blocks with five repetitions and the results were compared by the Tukey test.

The results showed that with the native rhizobium strains from the Chiapas zone, *C. brasilianum* CIAT 5234 reached DM yields equal to those obtained with the application of 100 kg/ha of N. *Centrosema macrocarpum* CIAT 5056 and *C. pubescens* CIAT 438 responded to the application of N but not to inoculation. *P. phaseoloides* CIAT 9900 responded to inoculation with the rhizobium strain CIAT 3918 (whose synonym is TAL 647) but the number of root nodes did not increase, which indicates that this strain competed with the native strains. The roots in *C. brasilianum* CIAT 5234 and *P. phaseoloides* CIAT 9900 were highly affected by inoculation.