Summary

From 1991 to 1993, 39 accessions of *Centrosema acutifolium*, 17 of *C. brasilianum*, 12 of *C. tetragonolobum*, 50 of *Desmodium heterocarpum*, 15 of *D. barbatum*, and 68 of *D. velutinum* were evaluated, as part of the CIAT-EMBRAPA/CPAC Agreement, in an Oxisol (dark red Latosol) at the Cerrados Agricultural Research Center (EMBRAPA/CPAC) with two levels of fertility recommended for establishing pastures and crops in the region.

The index of agronomic adaptation of *Centrosema acutifolium* CIAT 5112, 15249, and 15531 was outstanding. This species, however, presented limitations such as reduced flowering, low seed production potential, and high susceptibility to pests (leaf eaters) and diseases (mycoplasma and leaf spot).

Centrosema brasilianum showed a high incidence of mycoplasma, leaf blight (*Rhizoctonia*), and leaf spot (*Cercospora* spp.). However, *C. brasilianum* accessions CIAT 5234, 5178, 5667, 5671, 15387, 15521, 15522 and 15524 are promising and should be evaluated at the regional level in association with grasses and under grazing.

Centrosema tetragonolobum, despite its high and uniform dry matter production, is highly susceptible to

mycoplasma and presents a low index of flowering and seed production.

The three *Desmodium* species evaluated did not persist for more than 1 year, because of their slow establishment, low tolerance to drought, and high susceptibility to nematodes.

Centrosema brasilianum was the only species of the germplasm evaluated that merits further assessment within the Cerrados ecosystem.