

Summary

Selectivity and control of weeds by several herbicides applied as preemerging (oxyfluorfen, alachlor, metolachlor, and pendimethalin) and postemerging 30 days after sowing (bentazon, amine 2,4-D, fluazifop-butyl, and dalapon) in the establishment of *Centrosema macrocarpum* CIAT 5434 were evaluated. This evaluation was done between July and October of 1988 at the Gualaca experimental station of the Instituto de Investigaciones Agropecuarias de Panamá, located at David (46 m.a.s.l., 26 °C, and 4000 mm of rainfall). The predominant weeds were: *Borreria elata*, *Sida* sp., *Mimosa pudica*, *Cyperus* sp., *Panicum* sp., *Desmodium* sp., and *Aeschynomene histrix*.

Results indicate that the herbicides applied as preemerging did not affect survival of seedlings of *Centrosema macrocarpum* CIAT 5434, with the exception of oxyfluorfen, which caused severe damage to this legume. The herbicides and their doses (kg/ha) of active ingredients, in parentheses, most selective for the legume were alachlor (2.24) and pendimethalin (1.00). The preemerging herbicides pendimethalin (1.00) and oxyfluorfen (0.50) showed good control of weeds up to 50 days after being applied; while the postemerging bentazon (1.00) and fluazifop-butyl (0.75) controlled weeds well during the first 25 days after their application. Within the postemerging herbicides, bentazon (1.00) favored the greatest production of legume DM; on the other hand, amine 2,4-D (0.40) and dalapon (0.75) were highly toxic. Within the preemerging herbicides, pendimethalin (1.00) favored the greatest production of legume DM.