

Summary

In an Inceptisol at the Los Diamantes experiment station (10° 13' N, 83° 47' W, 250 m.a.s.l., 24.6 °C, 4013 mm), Costa Rica, the selectivity and control of weeds by several herbicides was evaluated in the establishment of *Arachis pintoi* CIAT 17434 using vegetative material and seed.

Alachlor applied as preemerging at a dose of 1.4 kg/ha of a.i. showed the best control of weeds and greater selectivity toward *A. pintoi*. Oxyfluorfen at the rate of 1.0 kg/ha of a.i. as preemerging and a mixture of metolachlor and Gramuron (5% v/v) as postemerging showed good control of weeds but caused severe damage to the legume, especially when it was established with seed. Better soil coverage and less herbicide damage were observed when vegetative material was used for planting.