

# Summary

An experiment was performed to measure dry matter (DM) production, nutritive value, and mimosine content of 20 *Leucaena* accessions from CIAT's germplasm bank. The accessions comprised 14 accessions of *L. leucocephala*, 4 of *L. diversifolia*, 1 of *L. pulverulenta*, and 1 of *L. shannonii*. The accessions were planted in a Mollisol at the national research center of the Instituto Colombiano Agropecuario (ICA), Palmira, Colombia (1000 m.a.s.l., 1095 mm average annual rainfall, and 24 °C average annual temperature). The treatments were arranged in a random block design with three repetitions. Each block consisted of 20 plots, each planted with 10 individuals of each accession at 1.5 m between plants and 2.0 m between rows. After transplanting, the plants were uniformly cut at 180 days. Every eight weeks thereafter, evaluations were made of the total DM production, DM production of thick and thin plant parts, plant height, and number of shoots per plant. Crude protein content, in vitro organic matter digestibility (IVOMD), and mimosine con-

tent of the better-performing accessions were measured in dry and wet seasons.

After 10 cuts it was found that the greatest production of DM per cut ( $2040 \pm 80$  kg/ha) was obtained in the accessions *L. leucocephala* CIAT 17467, 17475, 17488, 17491, 17495, 17498, and 17502 (cv. Cunningham). Dry matter production of thin plant parts was superior to that of thick plant parts, demonstrating a negative correlation ( $r = -0.42^{**}$ ) between DM production of the entire plant and the proportion of thick to thin plant parts. The average number of shoots per plant increased from 12 in the first cut to 42 in the tenth cut. Crude protein content in the seven accessions mentioned varied between 21.3% and 28.7% for thin plant parts and 7.3% and 10.1% for thick plant parts. In the period of minimal rainfall, values for IVOMD averaged  $54.9 \pm 2.9$  and  $32.6 \pm 1.8$  for thin and thick plant parts, respectively. Mimosine content of thick plant parts was six times less than that of thin plant parts.