

# Summary

The establishment and seed production of *Arachis pintoi* cv. Maní Forrajero Perenne, in association with maize or beans, was studied in a sandy loam Andosol of El Porvenir farm (rain forest, 1,300 m.a.s.l., and 2,700 mm rainfall) in Armenia, Colombia. A randomized complete block experiment design was used with three replications. Plots were 9 m x 4 m. Useful sample area for maize and beans was 18 m<sup>2</sup> and for Maní Forrajero, 3 m<sup>2</sup>. Treatments used were: (1) sole-cropped *A. pintoi* cv. Maní Forrajero Perenne; (2) sole-cropped maize; (3) sole-cropped beans; (4) Maní Forrajero Perenne associated with beans; and (5) Maní Forrajero Perenne associated with maize. There were a total of 15 experimental units (plots), spaced at 1 m both between and within blocks. In the associated systems, planting densities were 20 kg/ha for Maní Forrajero Perenne, 80 kg/ha for beans ICA-Caucaya, and 25 kg/ha for maize ICA V-305. Fertilizers were preplant incorporated in Maní Forrajero at the following rates: 1 t/ha of dolomitic lime (600 kg/ha Ca), 240 kg/ha Mg, 40 kg/ha P, and 80 kg/ha K. Fertilizers, once mixed, were placed at the bottom of the furrow and manually covered before planting. In monocrop systems, Maní Forrajero and beans were planted in furrows spaced at 0.5 m, and maize in furrows spaced at 1 m. In the associated system, Maní Forrajero and beans were planted at 0.25 m, in alternate double furrows (0.5 m between two rows of the same crop). In the Maní Forrajero-maize system, Maní Forrajero was planted at 0.5 m and maize at 1 m between furrows. Weed control was manual until the crops covered more than 80% of the soil.

Maní Forrajero was harvested manually 1 year after planting. Vegetative material was removed and a 10-cm layer of soil was collected and passed through a sieve. The seed obtained was washed and sun-dried to a 10% moisture content. Beans, due to their exuberant initial growth, invaded the associated Maní Forrajero. This initially caused a change in growth habit of Maní Forrajero, which presented etiolation and fewer green leaves than in monoculture. However, once the beans reached harvest maturity, Maní Forrajero showed a quick recovery.

The association Maní Forrajero-maize had an excellent establishment. Maní Forrajero quickly established itself, developing stolons up to 35 cm long in the 3 months following planting, whereas, at this same age in the monocrop, stolons had only reached a length of 20 cm. Seed yield of Maní Forrajero was high, whether in monoculture (6.3 t/ha) or in association with beans (5.4 t/ha) or maize (5.2 t/ha). In the three planting systems, 100-seed weight was 18.8 g, and seed purity, 98%. Maní Forrajero did not affect the yields of the associated crops.