

Summary

Two collections of *Arachis hypogaea* (C-94 and C-95) were evaluated between 1993 and 1996 on a Ultisol at

the Centro de Pesquisa Agropecuária dos Cerrados, Planaltina, DF, Brazil (15°35'30 S, 47°42'30 W, 1,000 m above sea level). The C-94 collection originated from the 1993-94 harvest and consisted of 36 accessions provided by the Instituto Agronômico de Campinas (IAC), São Paulo. The second collection, C-95, was from the 1995 harvest and contained mainly germplasm from the Centro Nacional de Recursos Genéticos e Biotecnologia, Brazil, and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), India. Checks for the C-94 collection were *A. hypogaea* cv. Caiapó and *Arachis pintoii* BRA-031143 (CIAT 22160); and for the C-95 collection, they were *A. pintoii* BRA-031143 (CIAT 22160), *A. sylvestris* BRA-013423, and the best-performing materials of the C-94 collection.

Accessions were arranged in a random block experimental design with three replicates. The equivalent population for *A. hypogaea* and *A. sylvestris* was 90,000 ± 15,000 plants/ha and, for *A. pintoii*, 10 kg/ha of noninoculated seed. Each replicate was formed by four rows, 2.5 m long, spaced at 0.5 m. At planting, the equivalent of 88 kg/ha of P was applied to each furrow. The C-94 collection was planted on 11 November 1993 and C-95 on 10 February 1995. Neither weeds nor pathogens were controlled.

The average DM production of the C-94 accessions at 90 days after planting was 3 t/ha, ranging from 1.3 t/ha for *A. hypogaea* cv. Caiapó to 5.0 t/ha for *A. hypogaea* accession IAC 5554 (Table 2). Average seed production was 1.8 t/ha, ranging from 1.3 t/ha for *A. hypogaea* accession IAC 5493 to 2.2 t/ha for *A. hypogaea* accession IAC 5347.

DM production of the C-95 accessions was similar at 90 days after planting, averaging 2.1 t/ha. DM production (kg/ha per millimeter of rain) was similar to that obtained with the C-94 collection, ranging from 5-7 kg/ha for *A. hypogaea* accessions IAC 5015, 5042, 5054, and 5554 to 8 kg/ha for ICRISAT accession 11326. Average seed production in the C-95 collection was 1.3 t/ha, ranging from 0.4 to 2.2 t/ha.

Based on the results obtained in these trials and on DM production between 90 and 180 days after planting, further research should be conducted with *A. hypogaea* accessions IAC 5554, 5054, 5480, 5069, 2233, and 5015; and with *A. hypogaea* accessions ICRISAT 11326, 11341, 11317, 11328, 11312, 11342, and 11331.