

Summary

The point of physiological maturity to harvest seed of *Desmodium ovalifolium* cv. Itabela was determined at the Zootechny Station of the Centro de Pesquisa do Cacau (CEPEC, its Portuguese acronym), located in southern Bahia, Brazil. The annual rainfall was 1300 mm and the average annual temperature, 23.3°C. The experimental area, consisting of Oxisols, was plowed and harrowed, and 100 kg/ha of dolomitic lime was applied in addition to 80 kg/ha of P_2O_5 and 30 kg/ha of K_2O at planting. For planting, 2 kg/ha of pure viable seed were used. The experimental design consisted of a randomized block design in a factorial arrangement, with 4 replicates. Treatments consisted of harvests at

7-day intervals between 21 and 56 days after peak flowering, with an additional treatment that consisted of weekly harvests of mature seed only, 14 days after peak flowering. Seed yield (kg/ha), physical purity (%), germination (%), pure germinating seeds (%), 1000-seed weight (g), and yield of pure viable seeds were measured. The highest yields were obtained 42 days after peak flowering and in the weekly harvests of mature seeds only. Seed collected 42 and 56 days after peak flowering and mature seeds collected during the weekly harvests presented the best results in terms of physiological quality. Physiological maturity occurred 42 days after peak flowering and weekly harvests of mature seed could be substituted by harvesting all fruits between 35 and 56 days after peak flowering.