

Euphorbia is a serious annual weed, very commonly encountered in soybeans in Brazil. It has also been referred to in the literature as Euphorbia geniculata Ortega and Euphorbia prunifolia Jacq. Euphorbia has several common names in Brazil, such as leiteira and amendoim bravo. It is not controlled by any residual herbicide used in soybeans. Concern for further encroachment and a lack of basic information regarding its behavior and control, prompted these studies of its germination, emergence, and control. Experiments were conducted in the field, greenhouse and laboratory in 1978, 1979 and 1980 at the National Soybean Research Center, EMBRAPA, Londrina, Brazil, located at 23°22'S, 51°22'W, and 585 m of altitude. Euphorbia seeds were planted at the following nine depths in pots in the greenhouse: 0, 2, 4, 6, 8, 10, 12, 14 and 16 cm. Percentage of emergence was measured from day 4 to day 18 after planting. Emergence from 0 to 8 cm varied from 40 to 47%. Emergence from 10 and 12 cm was 23 and 15%, respectively. There was no emergence until day 18 from 12 cm or deeper. Germination of seeds collected in March 1978 and stored under ambient condition was compared with germination of seeds collected in March 1979. There were no significant differences in germination between new and one-year-old seeds. Optimum temperature for germination was from 20 to 25 C. Post-emergence herbicides were applied in non-directed sprays. In this experiment the best herbicides for euphorbia control which caused limited injury to soybeans were acifluorfen at 0.36 kg/ha and S-3552 (N-4-[2-(4-methylphenyl)etoxy] phenyl-N'-metoxy-N'-methylurea) at 1.0 kg/ha.