

Abstract:

A field experiment was conducted for two consecutive seasons to study the effect of herbicide oxadiazon and hand weeding on growth and yield of three cultivars of *Arachis hypogaea* L. (Barborton, MH 383 and Florigiant) which differ in growth habit. Pod yield was greatly increased with the oxadiazon and hand weeding treatments which encouraged early flowering, increased flowering and development of higher leaf area index and increased number of pods and branches per plant. MH383, a semi-spreading Virginia type, was the highest yielding cultivar and maintained its better yield in the presence of weeds and with the partially effective weed control provided by oxadiazon. The superiority of MH383 was due to the rapid expansion of phenophase and thus suppression of weed growth. Monocotyledonous weeds were dominant over dicotyledonous ones, and *B. eruciformis* constituted about 66% of the monocotyledonous weeds. *Brachiaria eruciformis*, *Rhynchosia memnonia*, *Ipomea cordofana* and *Sonchus cornutus* were the most troublesome weeds as they emerged simultaneously with the crop in high densities and continued to compete with it till harvest. The experiment indicated the importance of cultivars as a factor in the integrated weed control management in groundnut.