

Pre-transplant herbicides for weed control in irrigated onion (*Allium cepa* L.) in northern Nigeria

T.D. Sinhaa and S.T.O. Lagokea

Abstract

Field trials were conducted at Samaru in the northern Guinea and at Bakuta and Kadawa in the Sudan Savanna ecological zones of Nigeria to identify suitable herbicides for weed control in irrigated onion. The herbicides tested were chlorthal-dimethyl, fluorodifen and oxadiazon. In the trials each herbicide treatment was compared with an identical treatment which received supplementary hand-weeding. The results of these experiments show that oxadiazon at 1.0–2.0 kg a.i./ha, with or without supplementary hoe-weeding at 6 weeks after transplanting, combined effective weed control with high bulb yields in irrigated dry season onions. While fluorodifen at 1.5 kg a.i./ha followed by supplementary hoe-weeding may be effective at sites with low weed infestation, a higher rate (3.0 kg/ha) may be desirable at sites with a higher broad-leaved weed infestation. Chlorthal-dimethyl at 10.0 kg a.i./ha effectively controlled weeds at all the sites and gave high onion yields at sites with 6–12% clay; the selectivity was, however, lower at Bakura with very light soil. Uncontrolled weed growth caused 49–86% reduction in the bulb yields compared with the best herbicide treatments.