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# WEED MANAGEMENT STUDIES IN RUBBER INTERCROPPED WITH COOKING BANANA IN SOUTHERN NIGERIA

Weeds under rubber, comprises of diverse species, which are vigorous in growth and present major problems of access and competition to rubber. Various weed management methods have been tried for the control of weeds under different cropping systems. Consideration has to be given to cultural improvements which include any practice that benefits the crop by enhancing its competitive ability against weeds (Zindahl, 1980). Hand weeding has been found to be very suitable as young seedlings emerge, but it is time consuming and costly. Mechanical weed management has also been practiced but Akobundu (1982) emphasized increased risks of erosion due to heavy rains under such methods. Matthews (1984) reported that ploughing is not effective to eradicate weeds between crops in the row and may damage crop roots. Chemical weed control is increasingly being used in different cropping systems (Marnotte and Tehia, 1983). Herbicides allow no-tillage practice which saves time and prevent soil erosion (Akobundu, 1980) but may appear costly for the small scale farmers (FAO, 1982).

As it has been realized that no single weed control method can suppress sufficiently all the weeds in a sole or multiple cropping system, much emphasis has been shifted towards integrated management of weeds (Bantilan *et al.*, 1974). Intercropping of perennials such, as cooking banana, is a new practice in young rubber plantations in Nigeria. This study was therefore aimed at developing a suitable weed management strategy under rubber plantations with cooking banana intercropping system.

The study was conducted at the Rubber Research Institute of Nigeria substation, Akwete, Nigeria from January to August 1995. Akwete is located at longitude 7°00′ and 7°19′ E and latitude 4°50′ and 4°65′ N. The area has a tropical moist humid climate, dominated by the tropical monsoon. The mean annual rainfall is 2126.25 mm. Rainfall is bimodally distributed with the higher peak in July. Temperature is usually high throughout the year with monthly means above 25°C. The soil is sandy to sandy-clay-loam with an acidic pH ranging between 4.0 and 5.6. The field was planted 36 months earlier with clone RRIM 501 spaced at 6.7 x 3.4 m and 18 months earlier with cooking banana cv cadaba spaced at 2 x 2 m. The experiment was laid out with three replications. The treatments were manual weeding with the use of hand hoe, spraying glufosinate ammonium (Basta 15) herbicide at 1.5 kg ai per ha, mulching with cooking banana dried leaf mulch (CBDLM) to cover the bases of the crops and interrows and an integrated weed management involving slashing with cutlasses followed by a herbicide treatment using 0.75 kg ai per ha glufosinate ammonium (GA) after 7 days and mulching with CDBLM on the next day. Each plot measured 6.7 x 6.8 m and was demarcated by a guard space of 1.0 m between plots. A survey of weed