

INTEGRATED WEED MANAGEMENT IN THE PLANTING STRIPS OF RUBBER

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The efficacy of different weed management methods for immature rubber was evaluated in a field experiment. The treatments included manual (scraping and slashing) and chemical (glyphosate and paraquat + 2,4-D) methods as well as their combinations to control weeds along the planting strips and plant basins. Application of glyphosate in the entire planting strip was the most cost effective method. The integrated approach of spraying glyphosate in the plant basin and slash weeding the remaining area was also found to be cost effective and eco-friendly.

Key words: Herbicide, Rubber, Weed management.

INTRODUCTION

Weed management is an important and expensive agronomic input especially during the immature phase of rubber cultivation. Weed control alone accounts for about 28 per cent of the total cost of cultivation (Mani and Pothen, 1987). Manual and chemical weeding are often used in rubber plantations for controlling weeds. Scraping and slashing are commonly resorted to in manual weeding. Scraping exposes the top soil. Exposed tropical soils degrade rapidly, their structure deteriorates and nutrients are lost by leaching and run off (Chung, 1997). Slashing results in rapid re-growth of the weeds necessitating more frequent weeding rounds. The swelling cost and the limited supply of labour are the other associated problems. Chemical weed control was reported to be more cost effective than manual weeding (Esekhade *et al.*, 1996). However, in view of the long term sustainable benefits of eco-friendly measures, an

attempt was made to develop an integrated method which involves manual and chemical control measures for the management of weeds in the planting strips of rubber.

EXPERIMENTAL

A field experiment was conducted at Shaliacary Estate, Punalur, from 1995 to 1999 to evaluate the efficacy of different weed management methods. The treatments included were scraping the entire platform (T1) as control, slashing the weeds in the entire planting strip (T2), spraying paraquat (Gramoxone) 2.25 L/ha + 2,4-D (Fermoxone) 1.25 kg/ha in the entire strip (T3), spraying glyphosate (Round up) 2 l/ha in the entire strip (T4), scraping the plant basin and slashing the weeds in remaining area in the strip (T5), spraying paraquat (Gramoxone) 2.25 L/ha + 2,4-D (Fermoxone) 1.25 kg/ha in the plant basin and slashing weeds in the remaining area (T6) and applying glyphosate (Round up)