

EVALUATION OF RICE STRAW FIBER-MATS AND OILPALM BUNCH FOR WEED CONTROL

Rosli Mohamad and A. Rajan

Faculty of Agriculture

Universiti Putra Malaysia, 43400 UPM, Serdang, Selangor, Malaysia

Keywords: integrated crop protection, integrated weed management, integrated pest management, turf pest management.

Introduction

Fibre-mats have been developed and recommended for erosion control on slopes and as mulching media in addition to weed suppression. Development of suitable biodegradable fibre-mats incorporated with slow release formulations of fertiliser and/or pesticides offer a more efficient and cost-effective alternative. The technique would be an efficient eco-friendly alternative for weed management in ornamentals and in the floriculture industry.

Materials and Methods

Several experiments were conducted to evaluate efficiency of herbicide incorporated 15-mm fibre-mats developed from oilpalm empty bunch fibres (EFB-mats). Mats with and without incorporated pre-emergence herbicide (metolachlor) were evaluated for (a) turf establishment using stolons, (b) ornamental transplants, and (c) young tree crops.

Results and Discussion

Results of all experiments showed excellent weed suppression for more than 16 weeks and very favourable growth and establishment of all test crops, both annual and perennial. Residual activity of incorporated metolachlor was observed to reach insignificant levels after 8 weeks of field placement.

Conclusions

The fibre-mats offer a sustainable and environment friendly system of weed management, particularly under newly planted trees and shrub species (e.g. Ornamentals and tree crops).