

ROOT TRAINER NURSERY FOR *HEVEA*

T.A. Soman and C.K. Saraswathyamma

Soman, T.A. and Saraswathyamma, C.K. (1999). Root trainer nursery for *Hevea*. *Indian Journal of Natural Rubber Research*, 12(1&2) : 17-22.

The first ever attempt to raise advanced planting materials of *Hevea* in root trainers is described. Root trainers were found to be helpful to avoid coiling and spiralling of roots which can sometimes become serious defects of polybag plants currently used as planting material. Aerial pruning of roots was found to induce prolific emergence of biologically desirable lateral roots. Three month old plants raised in root trainers showed better growth than those raised in polybags. The advantages of plants raised in root trainers over polybag plants are described.

Key words : *Hevea*, Nursery, Polybag plants, Root development, Root trainer

T.A. Soman (for correspondence), Rubber Research Institute of India, *Hevea* Breeding Substation, Kanyakumari - 629 851, Tamil Nadu, India; C.K. Saraswathyamma, Rubber Research Institute of India, Kottayam - 686 009, India. (E-mail: rrii@vsnl.com).

INTRODUCTION

To raise plantations, budded stumps of *Hevea* are grown in polythene bags and transplanted to the field at 2-3 whorl stage. Facility for the selection of vigorous plants of uniform growth and lesser casualty on outplanting are the major advantages of advanced planting material raised in polybags leading to reduction in the immaturity period of *Hevea*.

However, polybag plants have a few defects also, coiling and spiralling of roots being the most important among them. Coiled and spiralled growth of roots results in root strangling, slow growth, poor drought tolerance and lack of wind-fastness on field planting (Wilson, 1986; Sharma, 1987; Josiah and Jones, 1992). Also, the roots often penetrate the polybag and grow into the soil below. These roots break off when the plants are extracted from the nursery trenches. This sudden loss of a

considerable portion of the root system imparts severe shock to the young plants causing considerable delay in their recovery and growth on transplanting and may reduce the initial survival rate. Polybag planting technique is labour intensive and handling of the heavy polybags in the nursery and while planting in the field are difficult. Use of root trainer containers aim at overcoming the above mentioned handicaps of polybag plants. A brief account of a trial conducted on raising advanced planting materials of *Hevea brasiliensis* in root trainers is given in this communication.

MATERIALS AND METHODS

The root trainers used in the study were 26 cm long and had a volume of 600 cc. These rigid containers, made of polypropylene had a diameter of 7.5 cm at the top and tapered downwards ending in a hole of diameter 1.5 cm. The inside