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# ROOTING CHARACTERISTICS OF POLYBAGGED PLANTS OF *HEVEA BRASILIENSIS*

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The effect of size and type of polybags and that of nursery practices on rooting characteristics of polybagged plants of *Hevea brasiliensis* was studied. Direct seeding in polybags significantly increased the length, girth and dry weight of tap roots. The lateral and feeder roots were more for plants raised by direct seeding. In general, larger polybags had a positive effect on root growth. Retaining the plants in the polybags beyond 10 months after sowing resulted in curling of tap root. It was concluded that polybagged plants raised by direct seeding had better root growth, which helped in their better survival on field planting.

Key words: *Hevea brasiliensis*, Planting material, Polybag plant, Rooting character.

## INTRODUCTION

Advanced planting materials in the form of polybagged plants have become a widely accepted plating material in the cultivation of *Hevea brasiliensis*. These materials have helped in reducing the immaturity period of rubber tree (Abraham, 1986). It has been reported that 83.5 per cent of fields of small growers in India was planted with polybagged plants during 1987 (Krishnakumar and Nair, 1999). Budded plants with well developed root systems are more efficient in absorbing water and nutrients (Samarappuli *et al.*, 1996). The effect of the type of planting material on the rooting habits of the polybagged plant could be a vital component in the initial vigour and establishment of the plants. Not much information is available on the effect of root trimming on the subsequent growth of the tap root. The development and distribution of fine rooters (feeder roots) have great influence on the growth and nutrition of the rubber tree (Soong, 1976).

The growth of tap root being most important in anchorage of the plant, proper documentation of the rooting is essential. Therefore, information regarding the pattern of rooting in planting materials raised under different conditions is presented in this paper with the objective of documenting rooting habits of planting materials grown in polybags of different sizes with and without bottom and to study the effect of root trimming on the subsequent growth of the tap root.

## MATERIALS AND METHODS

The study was undertaken at Central Experiment Station of Rubber Research Institute of India, Chethackal, with 12 treatments replicated four times in a completely randomised design. The treatments were as follows:

$T_1$ A : Seedlings raised in 55 x 25 cm polybags and allowed to grow in the same bag after budding.

$T_1$ B : Seedlings raised in 55 x 25 cm

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