

SHORTENING THE IMMATURE PHASE OF NATURAL RUBBER THROUGH IMPROVED PLANTING MATERIAL AND AGROMANAGEMENT PRACTICES

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The lengthy unproductive immature phase of natural rubber is a matter of concern among rubber farmers, especially the smallholders. Majority of the rubber plantations in India takes about seven to eight years to attain tappable girth. This paper focuses on the results of a field experiment initiated to evolve an agronomic package to shorten the immaturity period of rubber in which the treatments included combinations of two types of planting material *viz.* green-budded stumps raised in polybags and plants raised by direct-seeding in polybags and two management options *viz.* current recommended package of practices, and an integrated management comprising enhanced nutrient application, selective manuring and conservation-oriented tillage. The results showed significant difference in the performance of two types of planting material. Direct-seeded green-budded plants were significantly superior to plants raised from green-budded stumps throughout the period under study. The effect of agromanagement practices was reflected in growth of rubber. The girth of the plants under integrated management was superior to that of respective type of planting material under current recommended practice. The soil nutrient status *viz.* the organic carbon and available K contents was significantly improved under integrated management. A higher canopy width was maintained by the direct-seeded green-budded plants under integrated management. The soil moisture storage was also positively influenced by integrated management. Thus direct-seeded green-budded plants under integrated management was significantly superior to all others and 68 per cent of the plants reached tappable girth in five years and nine months as against 19 per cent in the control (budded stumps raised in polybags under the current recommended practices). The study revealed that the gestation period of natural rubber could be brought down to less than six years through the use of direct-seeded green-budded plants and adoption of integrated agricultural practices.

Key words: Growth, *Hevea*, Immaturity period, Integrated management, Planting material

INTRODUCTION

Hevea brasiliensis is the main source of raw material for tyre and non-tyre industry which has a great contribution to Indian economy. The natural rubber plantation industry in India is dominated by small

holdings accounting 91 per cent of area and 92 per cent production (Rubber Board, 2016). Notwithstanding the fact that productivity has considerably increased (doubled within two decades) applying available technology, Indian rubber growers are not able to