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LONG-TERM PERFORMANCE OF A FEW INDIAN AND EXOTIC CLONES OF *HEVEA BRASILIENSIS* IN LARGE SCALE TRIALS IN INDIA

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Growth and yield of certain Indian and imported clones of *Hevea brasiliensis* in large scale trials were studies over 15 years of tapping in the traditional rubber growing zone of India. Data on yield and secondary characters like tapping panel dryness and diseases were also collected. In Trial-I, only RRII 105 recorded significantly higher yield (54.5 g/t/t) in BO1 panel while, in panel BO 2, RRII 105, RRII 101, RRII 116 and RRII 103 recorded significantly higher yield than the control clone Tjir1. In terms of mean yield over 15 years of tapping, clones RRII 105, RRII 101, RRII 116 and RRII 103 were significantly superior to the control. At the age of 23 years girth of clones RRII 114 (112.5 cm) and RRII 116 (107.9 cm) was significantly higher than that of the control Tjir 1 (95.5cm). In Trial-II, RRIC 100 with the yield of 49.3 g/t/t was significantly superior to the control GT 1 (41.4 g/t/t). At the age of 21 years, clones RRIC 104 (114.0 cm), RRIC 52 (107.8cm) and RRIC 100 (96.5 cm) showed significantly higher girth. In Trial-1 clone RRII 105 and in Trial-II RRIC 100 showed overall superiority.

Key words: Clones, Growth, *Hevea brasiliensis*, India, Large-scale trial, Yield.

INTRODUCTION

In India, the natural rubber tree [*Hevea brasiliensis* (Wild, ex Adr. de Juss.) Muell. Arg.] is traditionally cultivated in south western region in the states of Tamil Nadu, Kerala and Karnataka lying between 8°15' N and 12°52' N latitudes. Crop improvement methods in India and elsewhere have resulted in the development of many potential clones. Evaluation of the performance of these potential clones is necessary before recommending them to the farmers for large-scale cultivation. At the Rubber Research Institute of India (RRII), the indigenous clones selected from small-scale trials are tested along with the introduced clones in large scale and on farm trials. In this paper long-term performance of a few clones developed in India and Sri Lanka in large-scale trials conducted in the traditional rubber growing zone of India is presented.

MATERIALS AND METHODS

Location and planting materials

This evaluation was conducted at the Central Experimental Station of the RRII at Chethackal (9°22' N, 76°50' E, 80 m above sea level) in the traditional rubber-growing zone. A total of 20 clones were evaluated in two trials with 10 clones in each trial. Trial I included nine Indian clones (RRII 101, RRII 103, RRII 105, RRII 106, RRII 107, RRII 114, RRII 116, RRII 151 and RRII 156) and one Indonesian clone (Tjir 1). The performance of the clones was evaluated over 23 years of tapping. Trial II consisted of nine

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