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COMPARATIVE GROWTH AND YIELD PERFORMANCE OF *HEVEA* CLONES UNDER THE AGROCLIMATIC CONDITIONS OF TRIPURA

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The growth and yield performance of 13 *Hevea* clones were evaluated in Tripura in North East India which experiences a non-traditional environment for rubber cultivation. Analysis of growth performance of the clones revealed that RRII 429 had the highest girth and girth increment during immature phase. Clone RRII 176 recorded significantly higher girth increment under tapping than the check clone, RRIM 600 and attained the highest girth after six years of tapping. Yield analysis showed that RRII 422, RRII 429 and RRII 417 had significantly superior yield compared to RRIM 600 after six years of tapping. Among the clones tested, RRIM 600 had the lowest yield reduction during both summer and winter periods indicating the adaptability of the clone to the climatic conditions of Tripura. The results of the present study will aid in the identification of potential clones for commercial cultivation in this region.

Keywords: Clone evaluation, *Hevea*, North East India, Tripura

INTRODUCTION

The demand for natural rubber (NR) is increasing concomitant with industrial growth and this necessitates enhancing its production. *Hevea brasiliensis* (Willd. ex A. Juss.) Muell. Arg., the Para rubber tree, which is the commercial source of NR, is indigenous to the forests of Amazon basin, located within 5° latitude of the equator, where the climate is dominantly of wet equatorial type (Strahler, 1969). Later, the crop was introduced to other regions of the globe. The growth of the Indian rubber plantation industry has been mainly through the expansion of rubber cultivation in Kerala (Thomas and Panikkar, 2000) and the major portion of rubber growing areas in India is confined to the West coast of the country (8° to 12° North). Growing demand for NR, coupled with the limited scope for area expansion in the traditional region has necessitated an increase in production from the non-traditional regions of rubber cultivation like North East India. Though genetically adapted to a tropical environment, rubber cultivation has proved to be commercially viable in subtropical environments of North East India and China (Vijayakumar *et al.*, 2000). The state of Tripura (22°56'-24°32'N and 91°10'-92°21'E) in North East India represents a non-traditional environment for rubber cultivation. Tripura has subtropical warm humid climate with a

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