PERFORMANCE OF *HEVEA* SEEDLINGS FROM DIVERSE REGIONS IN THE AGROCLIMATE OF SUB-HIMALAYAN WEST BENGAL

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A study was initiated on performance of seedlings collected from diverse regions under the agroclimate of sub-Himalayan West Bengal. Seeds were collected from different agroclimatic zones *viz.* Kanyakumari in Tamil Nadu (South India), Tura in Meghalaya, Kamrup in Assam (North East India) and Jalpaiguri in sub-Himalayan West Bengal. The climate in these regions differed in different aspects, especially in temperature and precipitation patterns. Seedlings were affected by severe cold during early establishment phase in sub-Himalayan West Bengal; the damage being high in seedlings from Kamrup and minimum in those from Kanyakumari. The growth performance during immature phase showed that seedlings from Kanyakumari were better during the early establishment phase. Juvenile yield at the 5th year of planting was higher in seedlings obtained from Kanyakumari compared to that of the other locations. Fourteen seedling trees were screened on the basis of their juvenile yield (above 0.7 g cm^{-1} t^{-1} t^{-1}). Ten trees of Kanyakumari region showed yield above 0.7 g cm^{-1} t^{-1} t^{-1}, whereas, only one seedling from Tura and three seedlings from Nagrakata showed high juvenile yield. In general, the performance of seedlings from Kanyakumari region was comparatively better in the sub-Himalayan region than the polyclonal seedlings from North East India.

Keywords: Growth, *Hevea brasiliensis*, Juvenile yield, Seeds, Seedlings, Selection, Sub-Himalayan climate

INTRODUCTION

Polycross seeds are highly heterogenic (broad genetic variation) in nature due to which they perform well in diverse agroclimatic conditions. In tree species, characteristic with an extraordinary flexibility and adaptive potential, the chances of seeds to adapt to a wide array of adverse environmental conditions are high. Hence, a study on the performance of seedlings raised from seeds produced in diverse agroclimates has been undertaken with the aim of identifying good source of polyclonal seeds capable of producing seedlings with vigorous growth and high yield under the prevailing adverse climatic conditions of sub-Himalayan West Bengal.

MATERIALS AND METHODS

Rubber seeds were collected from four different regions *viz.* Kanyakumari (Tamil

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