JUVENILE YIELD PERFORMANCE OF POLYCROSS PROGENIES OF *HEVEA* IN GARO HILLS OF MEGHALAYA

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The present study involved two seedling nursery evaluation of polycross progenies during 2008 and 2011 at the Ganolgre research farm under the Rubber Research Institute of India, Regional Research Station, Tura, Meghalaya to assess juvenile yield performance of polycross progenies. In 2008 trial, the original plant population was 480 whereas it was 800 in 2011 trial. Data on plant height (m) and girth (cm) were recorded one year after planting in the field. Test tapping (g $t^{-1}10t^{-1}$) of the progenies in both the trials were carried out two years after field planting. In 2008 trial, the mean plant height was 2.8 m, girth was 8.7 cm and the juvenile yield was 4.02 g t^{-1} $10t^{-1}$ with an yield range of 1.2-12.7 g $t^{-1}10t^{-1}$, whereas in 2011 trial the plant height was 3.3 m, girth 8.7 cm and juvenile yield 2.3 g $t^{-1}10t^{-1}$ with an yield range of 0.4-9.2 g $t^{-1}10t^{-1}$. On the basis of test tap yield, top 15-20 per cent best performing seedlings (*i.e*. 41 selections) were selected in 2008 trial, while in 2011, 34 top yielding progenies were selected.

Keywords: Juvenile rubber yield, Polycross progeny evaluation, Test tapping

INTRODUCTION

Evaluation of potential *Hevea* clones for specific climatic conditions has been an objective in any *Hevea* breeding programme. Most of the rubber cultivation is practised in the traditional belts lying between $8^0$15'N and $12^0$52'N latitudes covering the states of Tamil Nadu, Kerala and Karnataka (Chandrasekhar *et al*., 2002). However, rubber cultivation in non-traditional areas like the north eastern regions of India is gaining importance for which it is necessary to find suitable and potential clones. Plantations are very rarely raised from seeds due to very high genetic variations in terms of growth and yield of such plantations which would result in low productivity. Nevertheless, seedling populations raised from polyclonal populations have several advantages because of their easy establishment along with their vigorous growth and very good survival in adverse climatic conditions. These populations tend to produce potential high yielding clones

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