EARLY YIELD AND GROWTH PERFORMANCE OF *HEVEA* CLONES EVOLVED BY ORTET SELECTION FROM POLYCROSS POPULATION IN ODISHA, EASTERN INDIA

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Evaluation of ten ortet clones was carried out in a clonal nursery trial under dry sub-humid conditions of Odisha state in eastern region of India. The ortet clones were assessed for yield based on test tapping, girth and girth increment, bark thickness, first branching height and number of primary branches. Ortet clones O 3 and O 4 recorded high annual yield of 114.8 g t^{-1} $10t^{-1}$ and 116.4 g t^{-1} $10t^{-1}$ respectively over three years. On the basis of pooled yield, two ortet clones *viz*. O 3 and O 4 were found superior to RRIM 600, IRCA 111, SCATC 93-114 and comparable with RRII 208, the clone recommended for eastern India. Five ortet clones *viz*. O 3, O 4, O 5, O 8 and O 10 had better girth and girth increment. Clones O 3, O 4 and O 10 recorded high bark thickness. Clones O 3, O 4 and O 8 recorded high branching height. Four ortet clones *viz*. O 3, O 4, O 7 and O 10 were found superior in terms of yield and growth. These selections will be subjected to further large scale evaluation.

Keywords: Clones, Girth, *Hevea*, Ortets, Polycross, Test tap, Yield

INTRODUCTION

Hevea brasiliensis is predominantly a cross pollinated species and hence considerable genetic variability is observed in seedling populations. Ortet selection is one of the earliest classical methods of crop improvement in rubber (Fernando, 1974) where elite mother trees with desirable traits are selected from large polyclonal seedling population. Selection of such ortets or elite mother trees followed by their long-term clonal evaluation led to identification of primary clones for use in commercial planting (Ho *et al*., 1980; Tan, 1987; Mydin and Saraswathyamma, 2005). Polycross breeding under stressful environments can help to select progenies with inherent tolerance to abiotic and biotic stresses (Jacob *et al*., 2013; Mydin, 2014). Thus, evaluation of ortet clones under dry sub humid climate of Odisha state could be helpful in identification of high yielding and stress-tolerant clones.

Ten elite ortets were earlier identified based on their yield, growth and other secondary characters from a polyclonal seedling population (Krishan, 2013a). The present study was carried out to assess yield,

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