ASSESSMENT OF WIND DAMAGE AND SCREENING FOR RESISTANCE OF RUBBER (*HEVEA BRASILIENSIS*) CLONES IN DRY SUB-HUMID REGION OF ODISHA

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Twenty one clones of natural rubber (*Hevea brasiliensis*), RRII 105, RRII 208, RRII 300, RRII 351, RRII 352, RRII 357, RRII 51, RRII 5, RRIM 600, RRIM 701, GT 1, PB 310, PB 28/59, PR 255, PR 261, SCATC 88/13, SCATC 93/14, Haiken 1, RRIC 102, IRCA 109, IRCA 111 and polyclonal seedlings under different trial plantations at Kadalipal, Dhenkanal in Odisha state of eastern India were evaluated for wind damage and endurance. Parameters assessed were uprooting, trunk snapping and branch breakage. The study indicated that periodic winds in the region caused higher number of branch breakage followed by uprooting and trunk snaping. Periodic winds usually occurred in April-May and resulted in visible damages. Study showed that wind endurance varied among the clones. Clones SCATC 93/14, Haiken 1, PB 310, PR 261, RRIC 102, IRCA 111, RRII 351, RRII 352 and polyclonal seedlings were broadly categorized as most wind-fast clones. Clones RRII 105, SCATC 88/13, IRCA 109, RRII 300, GT 1 and PR 255 were moderately tolerant clones. Clones PB 28/59, RRII 51, RRII 5, RRII 208, RRIM 600 and RRIM 701 were comparatively more susceptible to wind damage in the region. Initial plant vacancies, gaps in plantations, tall trees, heavy canopy, poor anchorage of trees in soil and strong winds coupled with rains seemed to be the major causes of wind damage. Form of wind damages and remedial measures to mitigate the damages is discussed in this paper. The present study found that wind damage is not of serious consequence and rubber can be cultivated successfully dry sub-humid region of Odisha.

Keywords: Clones, *Hevea brasiliensis,* Plantation, Resistance, Wind breaks, Wind damage

INTRODUCTION

The shrinkage of available cultivable land in the traditional rubber belt (8°-12° N) in the country has necessitated considering other areas of diverse agro-climatic conditions for the extension of natural rubber (*Hevea brasiliensis*) cultivation, with research emphasis to develop location specific clones and agro management practices (Sethuraj *et al*., 1989). Odisha state (17°-22° N) in the eastern region of India was consequently identified as a potential region. Successful natural rubber cultivation over the years and expansion activities in progress shows and supports good adaptability of the crop to the prevailing climate in the region.

Odisha, an eastern Indian state encompasses a net area of 1,55,707 sq. km and is a part of the voluminous shores of the Bay of Bengal with a coast line that stretches for about 450 km. The state stretches across the latitudinal parallels extending between

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