

SCREENING OF CORYNESPORA LEAF FALL DISEASE RESISTANT GENOTYPES OF *HEVEA BRASILIENSIS*

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Corynespora leaf fall disease (CLF) which is caused by *Corynespora cassiicola* is a serious leaf disease affecting rubber trees. The release of CLF resistant/tolerant clones for the industry is a challenge due to their long breeding and evaluation period. It is emphasized that precise identification of resistant clones at early stage of their breeding cycle is of utmost importance. The current study was carried out with the objective of screening *Hevea* genotypes based on growth performance and CLF disease severity. Thirty five genotypes belonging to the 2005 hand-pollinated progenies were subjected to screening along with their progenitors (RRIC 100 and RRIC 103, RRIC 52 and PB 86) and two check clones (RRISL 201 and RRISL 208). Experimental materials were multiplied by bud grafting. Field screening was done in budwood nursery and in the field at three locations *viz.* Nivithigalakale, Monaragala, and Gallewatta. Based on the dendrogram derived by Power marker® software program version 3.25, genotypes were assessed according to grouping with tolerant clones RRIC 100 / PB 86, susceptible clones RRIC 103/RRIC 52, and moderately susceptible clone RRISL 201. Field screening results taken thrice were assessed along with control clones. Growth performances of selected genotypes were determined. It was found that HP 27, HP 30, HP 31, HP 45, HP 48, HP 51 and HP 61 genotypes which have performed well with respect to CLFD could be added to enrich the breeding pool.

Keywords: *Corynespora* leaf fall disease, Disease visistance screening, Breeding, *Hevea* breeding

INTRODUCTION

Corynespora leaf fall (CLF) disease caused by *Corynespora cassiicola*, is a destructive disease affecting rubber yield and is of a relatively recent origin. The disease has now become a great threat to the natural rubber industry attacking several outstanding clones in Sri Lanka as well as South and South East Asia and Central Africa (Jayasinghe, 2000).

The clones identified as highly susceptible in Sri Lanka during the first epidemic in 1985-86 were RRIC 103, RRIC 104, RRIM 600, Tjir 1, RRIM 725, IAN 873 and FX 25. Later, RRIC 110, RRIC 131, RRIC 132, and RRIC 133 were also found to be susceptible to the disease (Jayasinghe and Silva, 1996). Use of chemicals to control CLF disease is not an economically feasible method and this also creates environmental and health hazards and as a result, not recommended by the