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GENETIC VARIABILITY OF *CORYNESPORA CASSIICOLA* INFECTING *HEVEA BRASILIENSIS* ISOLATED FROM THE TRADITIONAL RUBBER GROWING AREAS IN INDIA

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Molecular characteristics of 20 isolates of *Corynespora cassiicola* from 16 different locations of two rubber growing states of southern India viz., Kerala and Karnataka, were investigated using random amplified polymorphic DNA (RAPD) markers. RAPD analysis clearly indicated the existence of at least seven different genotypes of *C. cassiicola*. Considerable genetic variations were detected among the Kerala isolates and three of them, KL01/97, KL04/98 and KL06/97 showed completely different RAPD profiles from others with each of the primers tested. Putative virulence specific RAPD profile of *Corynespora* was identified among the isolates where the disease became epidemic in Karnataka. Genetic relationships were established among the *Corynespora* isolates.

Key words : *Corynespora cassiicola*, Genetic diversity, *Hevea brasiliensis*, Leaf disease, RAPD.

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INTRODUCTION

Corynespora cassiicola (Berk. & Curt.) Wei. causing *Corynespora* leaf disease was recognized earlier as a weak pathogen on *Hevea brasiliensis* (Ramakrishnan and Pillai, 1961; Ellis and Holliday, 1971). It became a major pathogen in South and South-East Asian rubber growing countries since 1980 and the disease attained an epidemic scale affecting vast areas of rubber plantations in Indonesia, Sri Lanka, Malaysia and Thailand (Jacob, 1997). In Sri Lanka, the disease developed into devastating proportions affecting about 4600 ha of rubber plantations (Liyanage *et al.*, 1989; Jayasinghe and Silva, 1996). *C. cassiicola* was reported for the first time in India in 1958 as a pathogen on *Hevea* (Ramakrishnan and Pillai, 1961). Since then the disease has been observed in various parts of Kerala and Karnataka states. Generally, *Corynespora* infection appears on a mild scale, confined to the nursery seedlings and budwood plants. Incidence of *Corynespora* infection on mature trees, causing severe damage, has been reported recently from Karnataka (Rajalakshmi and Kothandaraman, 1996). This disease is of serious concern as high