

Research Article

Screening of *Hevea brasiliensis* Clones for Tolerance to *Phytophthora meadii* Causing Abnormal Leaf Fall Disease – Method Standardization

J Limiya, K Anu, B Bikku and C Bindu Roy

Plant Pathology Division, Rubber Research Institute of India, Kottayam-686 009, Kerala, India; E-mail: binduroy@rubberboard.org.in

Abstract

Diseases caused by *Phytophthora* spp. in rubber tree (*Hevea brasiliensis*) is one of the major factors leading to reduction in yield of natural rubber. In breeding for disease resistance, it is important to identify resistant clones/varieties, the probability of which is increased with the availability of a reliable screening methodology. The present study is aimed at optimizing an *in vitro* protocol for efficient zoospore production of *Phytophthora meadii* to generate enormous quantities of zoospores which is essential for screening of *Hevea* clones for *Phytophthora* disease resistance. The resistance reaction of various clones can be studied by artificial zoospore inoculation on detached leaf discs of different clones maintained in moist chamber. Size of lesion produced following inoculation is inversely proportional to the resistance level of the clone towards *P. meadii* infection. Based on the level of resistance, the clones could be clustered into highly resistant, resistant, moderately resistant, susceptible and highly susceptible categories. Resistant clones thus detected from a collection of clones/ wild accessions can be deployed in disease resistance breeding program of *Hevea* against *P. meadii*.

Key words: *Hevea*, leaf disc assay, *Phytophthora meadii*, zoospore, zoosporangium

Citation: Limiya J, Anu K, Bikku B and Bindu Roy C. 2021. Screening of *Hevea brasiliensis* clones for tolerance to *Phytophthora meadii* causing abnormal leaf fall disease – method standardization. *J Mycol Pl Pathol* 51 (1):25-35