

## Assessment of Avocado as a Potential Alternative Host Plant for *Colletotrichum gloeosporioides* Causing Nutmeg Leaf Fall Disease

P.S.A.Rupasinghe<sup>1</sup>, W.M.R.W.B.Wijekoon<sup>2\*</sup>, G.Chandrasena<sup>1</sup> and P.D.P.M.D.Silva<sup>1</sup>

<sup>1</sup> Department of Export Agriculture, Uva Wellassa University, Badulla, Sri Lanka

<sup>2</sup> Central Research Station, Department of Export Agriculture, Matale, Sri Lanka

*Nutmeg (Myristica fragrans)* is an important Export Agricultural Crop grown in Sri Lanka. It is mainly distributed in Kandy and Matale Districts. Nutmeg Leaf Fall Disease (NLFD) was reported as an economically important disease in 2004 and *Colletotrichum gloeosporioides* was identified as the causal organism of the disease. Avocado, mix cropped with nutmeg in Kandyan home gardens reported some diseases with the same causal organism as that causing NLFD. Therefore, the study was conducted to assess the potential of avocado being an alternative host to the causal organism of NLFD and to upgrade the existing Integrated Disease Management practices of NLFD. The cross infection potential by *C.gloeosporioides* isolated from nutmeg leaves and avocado fruits were tested through cross inoculation between healthy avocado fruits and healthy nutmeg seedlings. Pathogenicity was quantified calculating Percent Disease Index (PDI) and Virulence Index (VI). The results revealed that there is a possible disease causing ability of both crops by each isolated strains of *C.gloeosporioides* in both ways. The calculated PDI values were 15% and 55% and VI values were 20.2% and 25.8% for nutmeg and avocado, respectively. Thus, avocado plant was identified as a potential alternative host for the causal organism of NLFD. Therefore, the field sanitation of avocado plants must be recommended as an additional measure, where nutmeg and avocado are grown together to avoid spreading of NLFD as a long term disease management strategy.

**Keywords:** Nutmeg Leaf Fall Disease, *Colletotrichum gloeosporioides*, Alternative host, Cross inoculation