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A study on leaf blight disease of arecanut (*Areca catechu* L.)

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A new Leaf blight disease of arecanut (*Areca catechu* L.) was recordedfor the first time in Polonnaruwa District, Sri Lanka during February 2010. This disease was affected around 400 young and mature palms in the whole area. The initial visible symptom of the disease is brown spots on the leaf blade which gradually spread through the whole leaf which result in leaf drying. Affected inflorescences also dried at later stage. The symptoms start from mature leaves and spread from bottom whorl to the top whorl of the leaves and at severe stage of the disease, the plant will die. In this study, isolation and identification of the causal organism/s of the disease and identification of suitable control measures were attempted.

Infected leaf samples were collected and cultured initially on tap water agar medium (TWA – 2% w/v) and then sub cultured on potato dextrose agar medium (PDA). Petri plates were observed daily for the growth of mycelia. The resulted mycelia were observed under a light microscope at 10x40 magnification for identification. Pathogenicity test was done by following Koch's postulates. Concentrations of 6.0g/L (0.48% a.i) and 2.0g/L (0.16% a.i.) Mancozeb 80% w/w and 3.5g/L (0.18% a.i) and 2.0g/L (0.10% a.i) of Captan 50% w/w fungicide suspensions were tested against the causal organism under the laboratory conditions.

Curvularia sp was identified as the causal organism of leaf blight disease of arecanut and it is confirmed by the microscopic studies together with pathogenicity test. Mancozeb @ 0.48% a.i completely inhibit the mycelium growth of *Curvularia* sp. Mancozeb @ 0.16% a.i (3.62mm /day mycelium growth), captan @ 0.18% a.i. (3.87mm /day mycelium growth) and captan @ 0.10% a.i (3.97mm /day mycelium growth) failed to inhibit the mycelium growth of *Curvularia* sp. Therefore, mancozeb @ 0.48% a.i can be recommended to control leaf blight disease of arecanut.

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