

# DETECTION OF MYCOPLASMA-LIKE ORGANISMS IN ROOT (WILT) DISEASE AFFECTED COCONUT AND ITS PUTATIVE INSECT VECTOR

J.J. Solomon, M.P. Govindankutty and K. Mathen

Central Plantation Crops Research Institute, Regional  
Station, Kayangulam, Krishnapuram-690 533, India.

Root (wilt) was perceived as a malady of the coconut palms towards the end of the last century from isolated gardens of Kerala. Today it prevails over extensive areas and brings about heavy loss of nuts. Despite extensive studies, its etiological agent remained elusive. Thin section electron microscopy initiated during 1982 resulted in the detection of MLOs in sieve tubes of the developing parts of symptomatic palms. Total absence of the mollicutes in disease-free palms and invariable presence of the organisms in all the disease-affected palms establish constant association. Rapid histochemical and fluorescence techniques employed for the light microscopic detection of the agents have identified the sites where the MLOs concentrate. From an inventory of the insect and mite fauna of coconut, the leafhopper *Sophonia greeni*, the plant hopper *Proutista moesta* and the lace bug *Stephanitis typica* were chosen for intensive studies. Detection of MLOs in the salivary gland and brain tissues of the lace bugs allowed to feed exclusively on leaflets of diseased palms establishes the ability of the bug to acquire MLOs and become infective. Role of MLO as the etiological agent and of *S. typica* as its putative vector is discussed.