

AGAVE AMERICANA— A NEW HOST OF
PHYTOPHTHORA PALMIVORA (BUTLER) BUTLER

Agave americana L. widely grown as an ornamental hedge plant was found to be seriously affected by a leaf rot disease during the south west monsoon months of 1984 at the Main Campus, Kerala Agricultural University, Vellanikkara, Trichur, Kerala. Almost all plants showed the leaf rotting symptom.

The initial symptom of the disease appeared as minute water soaked lesions on the upper surface of the matured leaves. Later these lesions enlarged as rotting, turned brown and covered the entire width of the leaf blade. The lesions proceeded up and down on the leaves and caused the breaking of leaves at the rotted portion. All the lower most leaves were infected in similar manner and caused the leaves to hang down, leaving only few leaves to stand erect. The broken leaves withered quickly (Plate 1). The causal agent was isolated from the freshly infected leaves and brought into pure culture on oatmeal agar. On artificial inoculation the pathogen produced characteristic symptom of the disease.

The fungus was grown on carrot agar for studying cultural and morphological characters. The mycelium of the pathogen was hyaline, profusely branching and nonseptate. It produced numerous sporangia in sympodial fashion on sporangiophores measuring $33.0-39.5 \times 22.0-37.5 \mu\text{m}$. The sporangia were papillate, lemoniform and caducous having short and thick pedicel measuring $2.0-5.0 \mu\text{m}$. The sporangium germinated readily in water with the production of zoospores. The fungus was identified as *Phytophthora palmivora* (Butler) Butler based on its morphological and cultural characters. According to the classification of Zentmyer *et al* (1977) this isolate could be placed under Group I or Group II. Das and Cheeran (1985) could also not place the isolate of *P. palmivora* obtained from black pepper in Kerala in a single group due to the overlapping characters. Cross inoculation of this isolate into pepper and rubber produced the symptoms of *P. palmivora* typical to the respective host, further confirming the identity of the pathogen. Chee (1969; 1974) listed 138 hosts of this pathogen which did not include *A. americana*. Furthermore, a search on relevant literature indicated that this is the first record of this pathogen on this host.

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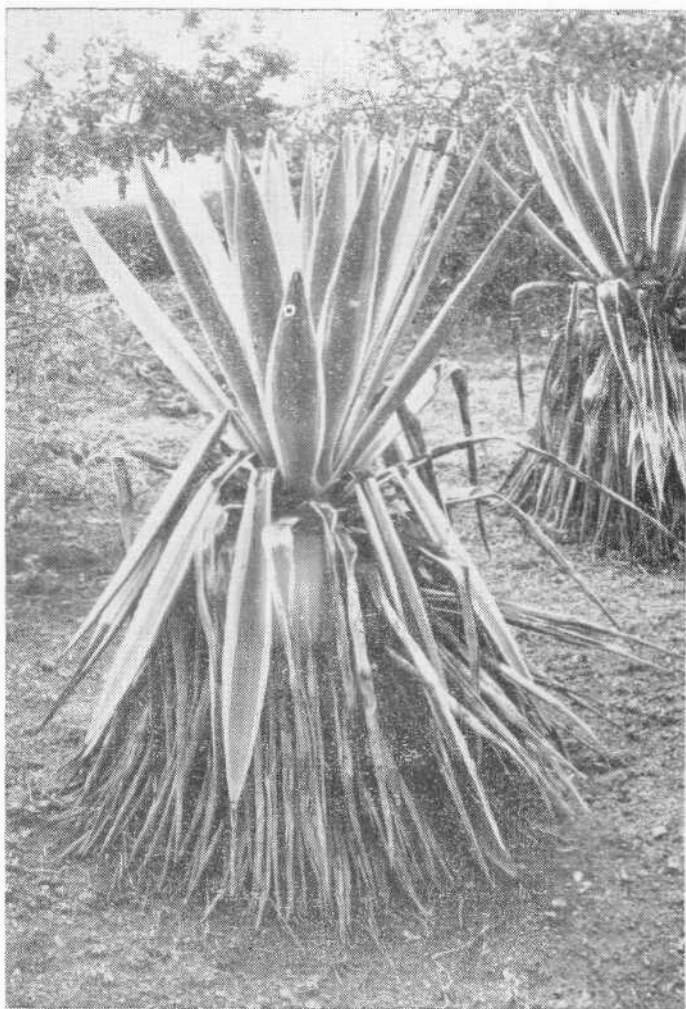


Fig. 1 *Agave americana* showing leaf rot symptoms of *P. palmivora*