

A SEVERE LEAF BLIGHT OF PALMYRA PALM (*BORASSUS FLABELLIFORMIS*) CAUSED BY *PESTALOTIOPSIS PALMARUM* IN KERALA

Borassus flabellifer Linn., (Syn. *Borassus flabelliformis*) is a tall palm which yields several products of commercial importance viz., toddy, nira, palm jaggery, fruit, leaves and fibre. The leaves are used for thatching, making fans, umbrellas, baskets and mats. In old times the leaves of palmyra palm were used for writing purposes.

In 1979, a severe leaf blight of *Borassus flabelliformis* Linn., occurred in the southern parts of Kerala. The purpose of our investigation was to determine the etiology and study the symptoms of this disease.

The symptoms are noticeable on mature old leaves. The spots developed as minute oval and dark brown specks on the leaf lamina. The spots gradually enlarged and often coalesced, forming oval or irregular patches resulting in characteristic drying up of the leaflets. Fully mature spots had a greyish centre with dark brown concentric zonations. In advanced stages of infection a major portion of the leaflet, especially the tip region dried up which later turned papery white. In certain cases, shedding of the central papery white necrotic tissue occurred resulting in shot-hole formations (Fig. 1). Severe leaf infection affected the fruiting capacity of the palm, besides appreciably reducing the value of the foliage.

On the upper leaf surface mature globose, spherical or ovoid black acervuli were formed, which contained the spores of the pathogen.

Isolations were made on potato dextrose agar from diseased leaves of palmyra palm collected from the field using the usual techniques.

Pathogenicity tests were made by inoculating healthy young palmyra palm with spore suspension of the organism (concentration adjusted to 10^4 spore per ml of sterile distilled water) prepared from 10 days old cultures. Control plants were sprayed with distilled water. Artificial inoculation experiments were successful only when pin-pricks were made on leaves prior to inoculation. Symptoms developed 4-6 days after inoculation but full development occurred 15-18 days. Artificial inoculation produced symptoms similar to naturally occurring symptoms, and the same organism was reisolated from the artificially inoculated plants. Isolations from diseased leaves collected from the field and also from inoculated leaves considerably yielded a *Pestalotiopsis* sp. The organism grew and sporulated well on potato dextrose agar. The acervuli were abundant in culture.

The conidia are five celled, the three middle cells dark and those at the extremities colourless, provided with a short, hyaline, persistent pedicel at the

lower end and three colourless slender, elongated appendages at the apex. The conidia measured 17-25 μm X 4.5-7.5 μm ; apical appendages on an average were 15 μm long.

The organism was identified as *Pestalotiopsis palmarum* (Cooke) Steyaert and the same has been confirmed by CMI, Kew, England (vide Report No. H. 447 80Y12). The diseased specimen was also deposited in the CMI Herbarium (Herb. IMI No, 247383).

P. palmarum (Cooke) Stey. has been recorded on the leaves of *B. flabettifer* in Godagiri, Suri., and Birbhum (West Bengal), Harpur (Bihar), India (Dube and Bilgrami, 1966). *Pestalotia palmarum* (Cooke) has been reported from Bombay (Parndekar, 1967) and *Pestalotia algeriensis* (Sacc. and Berk.) Cuba, on this host from Jabalpur, India (Agarwal and Sahni, 1965; Mitra and Tandon, 1965) but there is no previous record of this organism on *B. flabelliformis* from Kerala, It is also noted that there is no previous reports describing the symptoms of this disease.

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സംഗ്രഹം

പനഓലയെ ഗണ്യമായി നാശം വരുത്തുന്ന ഒരു കുമിറുരോഗം കേരളത്തിന്റെ തെക്കൻ പ്രദേശങ്ങളിൽ ഇടപ്രഥമമായി കാണുകയുണ്ടായി. ചെമ്പ്‌പാലോഷിയോപ്സിസ് പാലാറം എന്ന കുമിറു നിമിത്തമുണ്ടാകുന്ന ഈ രോഗം പുളിക്കുത്തുകളായി ഓലയിൽ പ്രത്യക്ഷപ്പെടുകയും, ക്രമേണ ഓലമുഴുവൻ വ്യാപിച്ച് ഓല കരിഞ്ഞുപയോഗ ശൂന്യമായിപ്പോകുകയും ചെയ്യുന്നു.

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