
FOLIAR YELLOWING AND ROOT ROT IN COCONUT SEEDLINGS CAUSED BY *PHYTOPHTHORA* SP.

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The establishment and subsequent growth of coconut seedlings transplanted in the field depends upon the site and drainage, especially in the areas prone to water logging. Association of root rot of coconut with *Rhizoctonia bataticola* (Menon and Nair, 1952) and *Phytophthora palmivora* (Harris *et al.*, 1984) and *Radopholus similis* (Mathen *et al.*, 1970) is known. Severe foliar yellowing and death of four- to five-year-old seedlings was noticed in water logged areas at Keechery village in Kannur district of Kerala during 1976, and in subsequent years. The root system of affected seedlings showed a varying degree of root rot.

The roots in the early stage of infection were washed thoroughly and plated on potato dextrose agar (PDA) and also Pimaricin-Vancomycin PCNB-Hymexazol (PVPH) medium (Tsao and Guy, 1977). *Fusarium* sp. and also *Phytophthora* sp. were isolated on PDA and *Phytophthora* sp. alone was isolated from PVPH medium. Isolate of *Phytophthora* sp. produced fluffy growth on carrot agar medium and abundant sporulation in water under continuous light. *Fusarium* sp. produced good growth and sporulation on PDA. Four-month old coconut sprouts (WCT) were transplanted into cement tubs of 75 cm diameter filled with nursery mixture of 3:1:1 (soil, sand, FYM). When the seedlings were about six months old, potted plants were inoculated with 250 ml of mycelial suspension of *Phytophthora* sp. and *Fusarium* sp. separately at the rate of six plants per isolate. The plants were given regular irrigation and were incubated for two months after inoculation.

The sprouts were pulled out two months after inoculation and observed for symptoms. Typical root rot symptoms were noticed in sprouts inoculated with *Phytophthora* sp. and mild foliar yellowing was noticed. However seedling

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death did not occur. There was a conspicuous absence of infection in *Fusarium* inoculated sprouts, thereby implying its non-pathogenic nature.

Though *Phytophthora* sp. could not cause death of the seedlings during the period of observation, typical foliar yellowing due to root rot was observed. Water logging under field conditions might have accentuated the root rot leading to death of the seedlings. Recent observations in the area showed poor bearing and foliar yellowing in coconut to varying degrees.

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