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COLLAR ROT DISEASE OF NURSERY RUBBER SEEDLINGS CAUSED BY *PYTHIUM SCLEROTEICHUM* DRECHSLER

Planting material of rubber (*Hevea brasiliensis*) are prepared of by budding elite clones on to 6-10 months old healthy seedlings raised from seeds of good quality. The seedlings thus raised are susceptible to many plant pathogens causing leaf, collar or root diseases. Among the diseases affecting the collar region, *Botryodiplodia theobromae* and *Sclerotium rolfsii* have been well documented (Sharples, 1925; Jayasinghe *et al.*, 1993).

A new collar rot disease of rubber seedlings was first noted in September 1993 in the Rubber Board's Central Nursery at Karikattoor (Pathanamthitta District, Kerala State). The symptoms appeared as sudden death of seedlings (Figure 1) at random in an area of approximately 2 ha in the nursery which has a total extent of 20 ha. In the affected blocks, nearly 15 per cent of the plants were diseased. The plants on examination showed water soaked lesions around the collar which later turned to dull brown in colour and led to death of the seedlings. On the dead seedlings, the collar was completely rotten emitting fishy odour.

The samples were brought to the laboratory and surface sterilized bits of infected tissue were used to isolate the pathogen on potato dextrose agar medium. The pathogen isolated was identified as *Pythium scleroteichum* Drechsler (IMI No.363538). The species was found to produce large furrowed, lateral antheridia borne on long stalks which entangle the oogonial stalk. Thick walled oospores were also produced in culture.

The purified culture of the pathogen was introduced in sterile soil in pots and rubber seeds were sown. The pots were placed on raised benches in a glass house to avoid contamination. When the seedlings emerged, watering was done profusely. Collar rot was noticed one month after emergence of the seedlings. The pathogen could be reisolated from the affected tissues, thus satisfying the Koch's postulates. Control plants raised in sterile soil and

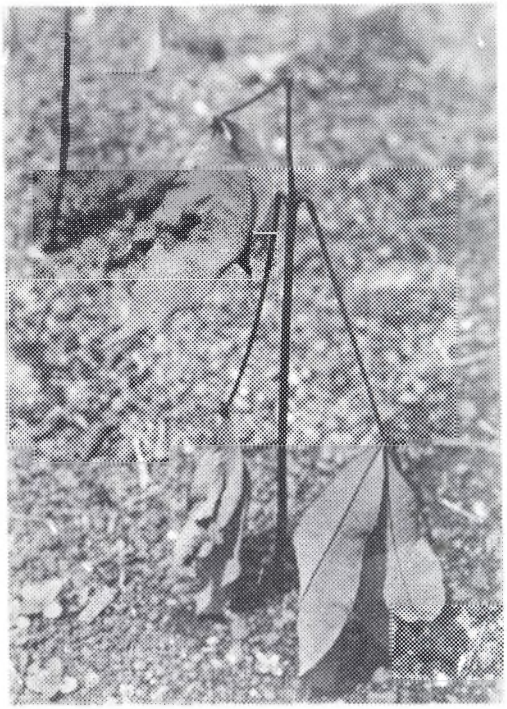

Fig. 1. Symptoms of collar rot disease caused by *P. scleroteichum* on a rubber seedling

watered similarly did not show any symptoms of the disease.

The spread of the disease was checked by drenching the nursery beds with either mancozeb 0.2% ai or methoxy ethyl mercuric chloride 0.015% ai Only one round of drenching was given.

The disease reappeared in the same nursery during November-December 1994. The pathogen could again be isolated from the affected seedlings. In a survey of the affected beds covering 2700 plants, 33.94 per cent seedlings were found affected. *Pythium vexans* associated with patch canker in rubber has been reported from India (Ramakrishnan, 1964). But this pathogen is not associated with any nursery diseases. The present report is the first report on the incidence of *Pythium scleroteichum* on rubber nursery seedlings.

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