



Figure 1. A typical tomato bunchy-top virus affected tomato plant.

Other hosts viz., *Arachis hypogaea* L.; *Dolichos lablab* (Roxb.) L.; *D. biflorus* Roxb.; *Chenopodium amaranticolor* Coste and Reyn; *C. murale* L.; *Crotolaria juncea* L.; *Gomphrena globosa* L.; *Pisum sativum* L.; *Phaseolus vulgaris* L.; *Vigna unguiculata* (L.) Walp and *Capharanthus roseus* Linn G. Don. tested gave negative results.

The physical properties indicated that the virus in crude sap withstood heating upto 80°C for 10 min but not 85°C, dilution upto 1:1000 and not 1:10,000 and longevity *in vitro* at room temperature upto 8 days.

The possibility of it being tomato spotted wilt is eliminated based on the symptoms of the diseased tomato plants are a typical of bunchy top virus (TBTv) as described by Smith¹. In addition, it is seen that *Chenopodium amaranticolor*, *Crotolaria juncea*, *Gomphrena globosa* and *Vigna unguiculata* give local lesions with tomato spotted wilt virus as reported by Prasada Rao *et al*² while these hosts reacted negatively with the virus under investigations.

Based on the symptom expression, host range studies and physical properties, the virus under report resembles a strain of bunchy top virus disease of tomato as reported by Ladipo³ from Nigeria and McClean^{4,5}, from South Africa. The virus under report has a higher thermal inactivation point (TIP)

85°C, longevity *in vitro* (LIV) upto 8 days while the virus reported from South Africa has (TIP) 60-70°C (LIV) 12-24 hr and that of Nigerian isolate has (TIP) 75°C, (LIV) 96 hr.

From the literature⁶, it is seen that tomato bunchy-top disease on tomato has not been reported so far and this is the first record of the occurrence of bunchy-top disease on tomato from India. Further detailed investigations are in progress.

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THE GENUS MYCELIOPHTHORA FROM INDIA

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DURING the studies on thermophilic fungi, an interesting fungus was isolated from a soil sample kept in an incubator at 50°C in 1978. The isolate under Culture No. FIM₃ when studied in detail on oat meal agar and 2% malt agar at 37°C was found to be a species of genus *Myceliophthora* Cost. This genus was first described by Costantin¹ as *M. lutea* which was made a synonym of *Chrysosporium* Corda by Carmichael². Oorschot³ reintroduced this genus with its type species, *i.e.*, *M. lutea* Cost., and proposed two new combinations, *M. thermophila* and *M. fergusii*. It is characterised by blastoconidia with narrow basal attachments, generally borne directly on hyphae or pedicels but sometimes also on ampulliform swellings, and has no arthroconidia.

The present isolate resembles the species *M. thermophila* (Apinis) Oorschot in having colonies growing moderately on 2% malt agar, thin, powdery in appearance, pale brown in colour, conidia obovoid to elongated, one-celled, smooth to rough, hyaline and with a narrow basal attachment; but differs in having thin, effuse, concentric rings of growth; sporulation good at 37°C, conidia slightly larger,

range from 5.5 to 11.5 μm by 3.5 to 5.5 μm ; optimum temperature between 30° and 40° C. Besides the study of morphology, its ability to decompose cellulose, hemicellulose and keratin was also tested. It was found to be a good keratinolytic fungus, growing profusely on strands of human hairs, but was a weak utilizer of cellulose and hemicellulose.

The genus is being reported for the first time in India.

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A NEW LEAF SPOT DISEASE OF *AILANTHUS EXCELSA* ROXB.

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A SERIOUS leaf spot disease of *Ailanthus excelsa* Roxb. (Family Simaroubaceae) was observed in August, 1979. The infection started from the middle part of the leaf-lets as small discoloured spots. Later, the spot became circular to irregular, light brown, surrounded by reddish halo. The spots were restricted by the midrib and chief veins. In advanced stage the diseased spot separated from the healthy lamina thus resulting in shot hole (figure 1).

The causal organism was isolated on potato-dextrose-agar medium and was identified as a species of *Phoma* (figure 2). The cultural studies¹ were made on malt-agar, oat-agar and rice-agar and the following character were noted.

Colonies on malt-agar attain a diameter of 7-8 cm after days; mycelium brownish black; pycnidia scattered, brown to black, parenchymatous, superficial to immersed, subglobose to globose, 93-233 μm in dia; pycnidiospores single-celled, hyaline cylindrical in oat-agar, globose to ovoid in malt-agar and rice-agar, 7.5 \times 3.7 μm . Chlamydospores abundantly produced in chains and were highly guttulated. The characters of the present isolate agrees well with *Phoma medicaginis* var. *pinodella* Boerema, Dorenbosch and Leffring².

The pathogenicity of the fungus was tested by spraying the spore suspension prepared in sterile water on the foliage of two months old plants. Test leaves



Figure 1. Infected leaf of *Ailanthus excelsa*.



Figure 2. Pycnidia and pycnidiospores of *Phoma medicaginis* var. *pinodella*.

were covered with polythene bags to maintain high humidity for the first 24 hours. Typical leaf spot symptoms were discernible after 10 days. Reisolations yielded the same fungus identical in all respects with the original culture. The disease appears to be a new record on *Ailanthus* and described for the first time from India³. The culture and specimen have been deposited in herbarium of Botany Department, Govt. Science College, Jabalpur as P.P.F. No. 510.

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