

LEPTOSPHAERIA LEAF SPOT AND BLIGHT OF GINGER IN INDIA

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GINGER is an important spice crop grown extensively in the foot hills and at medium altitude upto 1000 m above m.s.l. in Meghalaya State. A serious leaf spot and blight disease was observed on the plants during September, 1977 and 1978 at Ginger Development Farm, Nayabunglow in East Khasi Hills District of Meghalaya.

Initial symptoms of the disease were spindle-shaped yellow spots measuring 5 to 10 mm long. These spots increased in size and subsequently became necrotic and ash coloured in centre with distinct yellow, diffuse margin. Between the central necrotic zone and outer yellow margin, another zone of light brown colour was noticed. Under high humid conditions, two or more spots coalesced and resulted in blighting of



FIG. 1. Ginger leaves showing leaf spot and blight symptoms.

the affected leaves (Fig. 1). Black dot-like minute fruiting bodies were noticed in the central necrotic portion of affected leaves which, on microscopic examination, were found to be perithecia.

The perithecia were sub-epidermal, globose, dark brown, ostiolate without beak, 85–115 μ in diam. asci bitunicate, fusiform, cylindrical with almost rounded ends, hyaline, 8 spored, 45.5–52.5 μ \times 10.5–12.75 μ ; ascospores fusiform, obtuse at ends, mostly 3 septate without constrictions at the septa, hyaline to light brown, 17.5–22.75 μ \times 3.5–5.25 μ .

The fungus was cultured on potato dextrose agar medium. White mycelial growth appeared after 3 days of inoculation which grew profusely within 7–10 days and turned light brown. However, no sporulation or formation of any fruiting body was observed on this medium even after repeated subculturing. Pathogenicity test was conducted using a suspension of infected portions of leaves sprayed on to a potted healthy plant. The inoculated plant was covered under a belljar and kept moistened by regularly spraying with sterile water. Typical leaf spot symptoms appeared after 12–15 days of inoculation. Perithecia developed after 25–33 days.

The fungus was identified as a species of *Leptosphaeria* Ces. and de Not. (IMI No. 209023 at CMI, Kew). Its morphological characters resembles very closely with *Phaeosphaeria gingiberi* Sawada, reported to cause a leaf spot disease of ginger in Taiwan (Sawada). Dennis¹ has treated the genus *Phaeosphaeria* as a synonym of *Leptosphaeria*. The authors agree with him and therefore describe this fungus as *Leptosphaeria* (*Phaeosphaeria*) *gingiberi* Sawada.

On the leaves of ginger causing leaf spot and blight, Ginger Development Farm, Nayabunglow, Meghalaya, September 1977 and 1978, Vishwa Dhar, IMI 209023.

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