

SCLEROTINIA WILT OF EGG-PLANT

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In April, 1984, a few diseased egg plants (*Solanum melongena* L.) showing wilt symptoms were collected from two fields in a suburb of Faisalabad. One field had egg-plants raised from transplant seedlings while the other field contained plants sprouted from the ratoons of the previous season crop. The frequency of the wilted plants in the former field was 2.7 per cent while in the latter it was about 3.3 per cent. The causal organism associated with the affected plants and responsible for their wilt symptoms was a fungus, which upon identification came out to be *Sclerotinia sclerotiorum* (Lib.) de Bary. The fungus though already reported on species of Brassica, Eruca, Capsicum and on Sesame, Coriander, Hibiscus, Sunflower, Tobacco, etc. (Butler and Bisby, 1933), on chickpea (Khan, 1973-74) and on pea (Ilyas, 1984), is a new record on egg-plant in Pakistan as it is not included in the fungi of Pakistan, compiled by Ahmad (1956, 1969) and Mirza & Qureshi (1978).

Symptoms on the Host and Characteristics of the Causal Fungus: The stems of the affected plants were rotted and developed whitish brown necrotic patches running along the stem and surrounded by water soaked tissue, the necrotic areas sometimes girdling the stem completely. Some plants exhibiting advanced stage of wilting had necrotic areas extending along the entire axis of the main stem. At advanced stage of disease development, the leaves were drooped. The roots of the plants were not affected. On splitting the affected stem, the pith cavity of the stem was covered with white mycelial mat or strands of the fungus. Several black sclerotia of variable size were found embedded in the mycelial mat. They were arranged in a linear fashion inside the pith cavity. The largest sclerotia were as long as 10 mm, their width being equal to the diameter of the pith cavity. The average sclerotial length was 6 mm. The mycelial strands were also found below the affected bark of the stem but without sclerotia. The fungus from rotted stem tissue was isolated on PDA where it produced white diffused growth on the surface of the agar. The hyphae

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of the mycelium were hyaline, much branched and closely septate. The fungus also produced sclerotia on PDA culture. They were pinkish black first, but turned dark black later on. They were also variable in size and shape. The smaller sclerotia were round while the bigger varied from flat to irregular in shape. The size of the sclerotia on PDA varied from 1.0-7.0 mm with an average of 3.9 mm.

Pathogenicity : Seedlings of egg-plants were transplanted into China clay pots (45x30 cm size), containing autoclaved field soil. At adult plant stage of flowering, ten plants, each in a separate pot, were wound inoculated with a 7-day old mycelial culture of *Sclerotinia sclerotiorum*. Each plant was given a 5-6 mm cut on the stem, about 3 cm above the soil surface, with the help of a flame sterilized scalpel. The plants were inoculated with almost equal amounts of mycelium, scraped from PDA culture by placing the culture into the cuts, with the help of sterilized forceps. The wounds were sealed with vaseline to prevent drying of the culture and the wounds. Ten wounded but non-inoculated plants served as control. The plants were kept in the green house at $25 \pm 3^{\circ}\text{C}$ temperature. All the inoculated plants exhibited characteristic symptoms of wilting within 10-20 days, like those of the naturally infected plants while no symptoms of the disease appeared on the wounded non-inoculated plants. The fungus was reisolated from the wilted plants and was found to be the same, i. e., *S. sclerotiorum*, as was identified from naturally infected plants.

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