

II. A NEW RECORD OF POST-HARVEST POD DECAY OF PEA BY
SCLEROTINIA SCLEROTIORUM

Mohammad B. Ilyas*

During February, 1984, a few diseased pea pods suffering from white mouldy surface decay were collected from a pod lot at Vegetable Market, Faisalabad. The frequency of such diseased pods was approximately 4.7 per cent in this seed lot. The causal organism associated with the affected pod tissue as well as the seed inside was a fungus which upon identification came out to be *Sclerotinia sclerotiorum* (Lib.) de Bary. The infection was probably (from field) on the pods touching the soil. The fungus, though already reported on species of Brassica, Eruca, Capsicum and on sesame, Coriander, Hibiscus, Sunflower, Tobacco, etc. (Butler and Bisby, 1933), is a new record on pea in Pakistan, as it is not included in the Fungi of Pakistan, compiled by Ahmad (1956, 1969) and Mirza and Qureshi (1978).

Symptoms on the Host and Characteristics of the Causal Fungus

The surface of the affected portion of pods was covered with a white mycelial mat surrounded by water soaked tissue. The hyphae of the mycelial mat were hyaline, much branched and closely septate. The fungus penetrated the pod tissue and infected the seeds within the pods. The seeds were decayed, shrivelled and covered with white mycelial mat of the fungus. The fungus from Rotten pod tissue and seed was isolated on PDA where it produced white diffused growth on the surface of the agar. The fungus produced sclerotia, both on the rotten pod tissue as well as on PDA. The sclerotia on PDA were pinkish black first, later turned dark black, whereas on pod tissue they were first pinkish white but later turned to black. The sclerotia on pod tissue were embedded into white mycelial mat covering the inner surface of the affected pods. They were 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 varied from 1.0 to 7.0 mm on PDA with an average of 3.5 mm and 2.0-7.0 mm on pod tissue with an average of 4.0 mm.

*Department of Plant Pathology, University of Agriculture, Faisalabad.

A New Record of Sclerotinia sclerotiorum on Pea

Pathogenicity

Healthy pods of pea plants were surface sterilized in 70 per cent ethanol for two minutes and then washed thoroughly with distilled sterilized water. These pods were divided into four lots, each with 20 pods. One lot was wound inoculated with an isolated pure mycelial culture of *Sclerotinia sclerotiorum* with the help of a sterilized inoculating needle; the second lot was surface inoculated with a homogenized pure mycelial culture of the fungus by brushing the homogenized culture on to the surface of the pods. The third and the fourth lot served as wounded non-inoculated and non-wounded non-inoculated control, respectively. The inoculated and non-inoculated lots were incubated at 25 °C for 7 days. Both the wound and surface inoculated lots developed characteristic decay symptoms, within 4-6 days, as were on the naturally affected pods. The wound inoculated and surface inoculated lots developed decay symptoms on 90 per cent and 70 per cent of the pods, respectively, whereas no symptoms developed on wounded non-inoculated and non-wounded non-inoculated pods. The decay symptoms were more vigorous on wound inoculated than on surface inoculated pods. Upon reisolation, the fungus came out to be the same (i. e. *S. sclerotiorum*), as identified from the naturally affected pods.

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