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COLLAR ROT OF SOYBEAN—A NEW REPORT FROM INDIA

A SEVERE collar rot disease of soybean, *Glycine max* (L.) Merrill, was first observed from Vellayani, Kerala, during 1979 on the variety E.C. 118307.

The symptoms initiated as brownish black discoloration just at the soil level near the collar region. Gradually the discoloration was found to spread 3–5cm both upwards and downwards along the stem and tap root respectively. Soon it girdled the basal portion of the stem resulting in drooping and drying up of the leaves followed by defoliation. In advanced stages of infection, all the leaves were shed, leaving the stem and branches bare. Whitish mycelial growth often studded with small sclerotia could be seen on the affected collar region and in the soil around the infected plant. Finally the infected plants wilt completely (Fig. 1). Roots of the affected plants showed symptoms of rotting.

The causal organism was isolated on potato dextrose agar (PDA) and repeated isolations from the collar region and roots yielded the same organism. Pathogenicity of the isolated organism was proved following Koch's postulates.

The mycelium of the fungus is creamy white initially turning to light brown at maturity. The hyphae septate, 5·25 to 8·75 μm wide. Fully formed sclerotia measured 1·05 to 1·12 mm in diameter. The causal organism was identified as *Rhizoctonia solani* Kuehn. The perfect state of the organism [*Thanatephorus cucumeris* (Frank) Donk] was not observed. The culture is deposited at the Department of Plant Pathology, College of Agriculture, Vellayani.

FIG. 1. Soybean plants showing wilting symptoms.

A perusal of literature revealed that infection of soybean roots by *R. solani* Kuehn was recorded from U.S.A.[1]. Aerial blight of soybean caused by *R. solani* Kuehn has been recorded from India[2] and Louisiana[3,4] in U.S.A.

This is the first authentic record of collar rot of soybean caused by *R. solani* Kuehn from India.

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