Host-pathogen Interaction Between *Cephalosporium acremonium* Corda and Maize (*Zea mays*) Seedlings

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Abstract

Black bundle disease is one of the soil borne diseases of maize caused by *Cephalosporium acremonium*. It is difficult to detect the disease at an early stage as the symptoms appear only after post-flowering stage of plant growth or milky stage of the kernels. An effort was made to find the early infection by following the standard blotter method using the mycelium suspension cultures of *C. acremonium* which consisted of various morphological cell types representing stages in the growth cycle. Two susceptible varieties of maize, CM 500 and Renuka G-25 were used in this study. Observations were made on the effect of suspension culture on seedling growth and on the mode of infection, entry of hyphae and development of mycelium within the host tissue. Better visualization of the *C. acremonium* was attempted by using different stains like trypan blue and toluidine blue. It was clearly evident that *C. acremonium* treated seeds showed less growth when compared to control. Browning of vascular tissue was also observed in the seedlings of suspension culture treated plates. The enzyme responsible for the reducing the growth and browning of the vascular tissue is yet to be confirmed.

Key wards: Black bundle disease, *Cephalosporium acremonium*, CM 500, maize seedlings, Renuka G-25.

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