

Short Communications

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First Report of *Colletotrichum orbiculare* Causing Anthracnose in Cucumber

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ABSTRACT

Keywords

Colletotrichum orbiculare,
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Cucumber (*Cucumis sativa*) is grown worldwide but suffers from several production constraints including frequent occurrence of diseases. Anthracnose (*Colletotrichum orbiculare*) is serious disease which infects all the aerial parts of cucumber plant and is reported for the first time in Kashmir. Under humid conditions, the lesions become dotted with pinkish masses of conidia and are manifested as angular to roughly circular reddish brown lesions on leaves. Under humid conditions the lesions become dotted with pinkish masses of conidia. Conidia are mostly produced singly and occasionally in chains at the tip of conidiophores acrogenously. The pathogen (*Colletotrichum orbiculare*) was successfully isolated from the infected leaves. The culture was raised on oat meal agar for growth and development. The pathogenicity of fungus was successfully established. The detailed morphological characters of the isolated pathogen are reported.

Anthracnose, like symptoms were noticed on cucumber vines in Shalimar Srinagar (Jammu and Kashmir) in the month of June 2011. The initial symptoms appeared as roughly circular slightly chlorotic pin-head spots which turned light brown near the veins. The symptomatic variations observed in the lesions formed during the course of infection by the pathogen varied from irregular and jagged to extensive and dark-reddish coloured with grayish centers showing acervilli with dark brown setae followed by cracking of lesions and distortion of leaves towards the vague of July. The centre of lesion was cracked, dropped out and gave shot hole like appearance. The average lesion size was 7.5 to 9.0 mm

reaching to a maximum of 1.5 cm with 3-5 acervilli/leaf lesion. For pathogenicity test, the fungus was studied both on host as well as in culture. The fungus showed slow growth on oat meal agar medium. The culture was initially white coloured with sparse aerial mycelial growth. The mycelium was hyaline, septate and branched with hypha of 3.2-(3.77)-4.8 μm width. Acervilli were formed 3 weeks after vegetative growth in culture. However, no mycelial growth was seen on host. The pathogen formed acervilli in culture as well as on the adaxial surface of infected cucumber leaves. Acervilli were salmon coloured, slightly raised and saucer-shaped with 1-3 hair-like black setae which measured 12.8-

(33.9) -70.4 × 1.6-(5.5)-6.4 μm in size on host and 12.8-(43.9)-73.6 × 1.6-(5.1)-9.6 μm in culture. Conidia were hyaline, oblong, ovate and single celled and measured 3.2-(6.0)-6.4×3.2 (5.1)-6.4 μm in size on host and 3.2-(6.1)-9.6 × 3.2-(3.63)-4.8 μm in size in culture. The identity of the pathogens was

further confirmed at Indian Type Collection Centre under the I.D. No. 9282.14. A respectively while as, Similar descriptions of acervulli and hyphae have been given by Cano *et al.*, (2004), Kumar and Hyde, (2004), Photita *et al.*, (2004) and Agrios (2005).



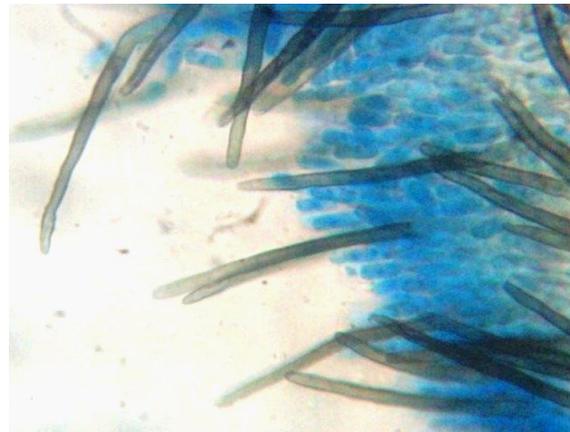
Cracked centre



Distorted leaves



Fungal colony



Acervulli with setae



Acervuli in culture

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