Research Article

Cultural, Morphological and Pathogenic Variability of *Colletotrichum gossypii* Causing Anthracnose of Cotton

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Abstract

Five isolates of *Colletotrichum gossypii* were collected from different cotton growing districts of Rajasthan *i.e.,* Udaipur, Chittorgarh, Hanumangarh, Sri-Ganganagar and Rajsamand. All isolates exhibited variability in respect to cultural, morphological characters and pathogenic. In cultural variation, maximum mycelial growth (88.25 mm) was recorded in RJCG-3 isolate with dull white colour colony, white fluffy growth with light orange pigmentation and abundant sporulation (32.2 x 10^4 ml^{-1}). The shape of conidia varied from hyaline, smooth, falcate to curved with tapering ends. The length and width of conidia varied from 20.25-28.92 µm and 3.35-3.91 µm respectively in different isolates. Acervuli and setae length & width ranged from 198.80-215.30 µm × 64.50-85.25 µm & 115.25-132.92 × 5.35-5.70 µm respectively in five isolates. However, the maximum length (28.92 µm) and width (3.91 µm) of conidia, maximum length (215.30 µm) and width (85.25 µm) of acervuli, maximum length and breadth of setae (132.92 µm and 5.70 µm) was recorded in isolate RJCG-3. The isolates RJCG-1,3 and 4 collected from Udaipur, Hanumangarh and Sri Ganganagar districts were found highly virulent with 33.21, 46.12 & 39.56 per cent disease incidence, respectively.

Keywords: Anthracnose, *Colletotrichum gossypii*, cotton, cultural, morphology and pathogenic variability

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