Research Article

Molecular Characterization of *Bipolaris sorokiniana* Causing Spot Blotch of Wheat and its Management

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Abstract

Spot blotch incited by *Bipolaris sorokiniana* (Sacc.) Shoemaleris one of the destructive diseases of wheat in warm and humid regions of India. In the present study, the identity of the pathogen was ascertained through molecular method by amplifying its genomic DNA and sequencing 562bp band of its ITS region. Four different fungicides were evaluated under *in vitro* conditions as well as in experimental field for the management of spot blotch. Complete inhibition of mycelial growth was recorded in 50-100 ppm of propiconazole and Tebuconazole under laboratory conditions. In experiment of botanicals, the maximum mycelial inhibition (44.71%) was observed in Turmeric rhizome extract at 10 per cent concentration. While among different bio agents, *Trichoderma harzianum* effectively inhibited the maximum mycelial growth of pathogen(75.55%). In experimental field, two foliar sprays of 0.1 per cent propiconazole at tillering and booting stages effectively suppressed the spot blotch severity with significant increase in yield. Alternatively, two sprays of 0.1 per cent tebuconazole also managed spot blotch under field conditions.

Key words: *Bipolaris sorokiniana,* DNA, propiconazole, PCR, spot blotch, tebuconazole

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