

## Research Article

## Management of Rice Blast Disease by Fungicides in Sub Himalayan Zone of West Bengal

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### Abstract

Rice (*Oryza sativa* L) crop is subjected to various biotic stresses and among them, Blast is the most important and destructive disease, which is caused by *Pyricularia oryzae* (Teleomorph- *Magnaporthe oryzae* Couch) formally known as *Pyricularia grisea* (Cooke) Sacc.] (Couch and Kohn, 2002). Seven different fungicides viz., Azoxystrobin 23% SC, Tricyclazole 75% WP, Azoxystrobin 23% EC + Difenoconazole 25% EC, Tebuconazole 50% EC + Trifloxystrobin 25% WG, Tebuconazole 25% EC, Difenoconazole 25% EC and Tricyclazole 75% WP + Mancozeb 75% WP were used for *in vitro* and *in vivo* evaluation of fungitoxicity against *P. oryzae*. Under *in vitro* condition, the highest inhibition was recorded by Azoxystrobin 23% EC + Difenoconazole 25% EC. ED 90 value of 405.58 was recorded by Azoxystrobin 23% EC + Difenoconazole 25% EC which is closely followed by 405.73 in Tebuconazole 50% EC + Trifloxystrobin 25% WG. Under *in vivo* condition, all the fungicides were effective in the management of rice blast disease but the lowest AUDPC of 348.15 was recorded by 3 sprayings with Tebuconazole 50% EC + Trifloxystrobin 25% WP which is closely followed by 3 times spray with Azoxystrobin 23% EC + Difenoconazole 25% EC with an AUDPC of 362.96. These two treatments are at par with each other. Highest yield of 4.07 t/ha was recorded by 3 spraying with Tebuconazole 50% EC + Trifloxystrobin 25% WG.

**Key words:** Rice, Blast, *Pyricularia*, Azoxystrobin 23% EC + Difenoconazole 25% EC

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