

Research Article

Efficacy of Fungicides and Bioagents against Tomato Wilt Caused by *Fusarium oxysporum* f. sp. *lycopersici*

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Abstract

Wilt of tomato caused by *Fusarium oxysporum* f. sp. *lycopersici* is a serious threat to tomato crop in Rajasthan as well as other parts of India. The current research was planned to evaluate fungicides and bioagents against wilt pathogen under laboratory and pot conditions. Five fungicides namely, Tebuconazole, Hexaconazole, Tebuconazole + Trifloxystrobin, Carboxin + Thiram and Carbendazim+Mancozeb were evaluated at 500 and 1000 ppm. The overall results showed that all fungicides significantly inhibited mycelial growth of *F. oxysporum* f. sp. *lycopersici*, however, Tebuconazole + Trifloxystrobin was found most effective followed by Carbendazim + Mancozeb at both the concentrations. Among BCAs, *Trichoderma asperellum* was most effective followed by *T. harzianum* against this disease. Under pot conditions, tomato seedlings steeping with Tebuconazole 50 per cent + Trifloxystrobin 25 per cent WG @ 0.1 per cent + *T. asperellum* @10 per cent recorded minimum disease incidence followed by tomato seed treatment with Tebuconazole 50 per cent + Trifloxystrobin 25 per cent WG @0.1 per cent + *T. viride* @ 10 per cent at 30, 45 and 60 DAT.

Key words: Disease incidence, fungicide, tomato, wilt

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