Research Article

Evaluation of Integrated Disease Management Modules against Wilt Disease of Ajwain (*Trachyspermum ammi* Sprague) Caused by *Fusarium solani*

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Abstract

Integrated disease management modules against wilt disease of Ajwain were evaluated during *Rabi* season 2015-16 and 2016-17 under pathogen inoculated condition. The module comprising in-furrow soil application of de-oiled neem cake mixture @ 100g sqm^{-1}enriched with *Pseudomonas* + *Trichoderma* bio-formulations each @ 2 per cent at sowing + seed treatment with carbendazim 50 WP @ 0.1 per cent and drenching with tebuconazole 25 EC @ 0.10 per cent at 45, 60 and 75 days after sowing resulted in minimum wilt disease (18.3%), maximum control (79.7%) with higher seed yield (9.7q ha^{-1}) and was found best effective compare to rest of the treatments and control. This was followed by module comprising in-furrow soil application of de-oiled neem cake mixture @ 100g sqm^{-1}enriched with *Trichoderma* bio-formulation @ 2 per cent at sowing + seed treatment with carbendazim 50 WP @ 0.10 per cent and drenching with tebuconazole 25 EC @ 0.10 per cent at 45, 60 and 75 days after sowing resulted in 29.0 per cent wilt incidence, 67.9 per cent disease control and 8.3q ha^{-1} seed yield. Enumeration of rhizospheric population of *T. viride, P. fluorescens* and pathogen revealed reduced count of *F. solani* and increased count of *T. viride* and *P. fluorescens* played significant role in suppression of the wilt disease.

Key words: Ajwain, bio-formulation, carbendazim 50 WP, *Fusarium solani,* neem cake, *Pseudomonas fluorescens, Trichoderma viride,* tebuconazole 25 EC, *Trachyspermum ammi,* wilt

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