

***In-vitro* evaluation of fungicides, botanicals and bioagents against pomegranate fruit spot caused by *Alternaria alternata* (Fr.) Keissler**

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ABSTRACT : Five non-systemic, seven systemic and combi-products and bioagents along with ten botanicals were evaluated *in vitro* against *Alternaria alternata*, the causal agent of fruit spot of pomegranate. Non-systemic fungicides Captan, Antracol and COC at 0.3%, systemic fungicide Iprobenfos at 0.1 per cent and a combi-products, Carboxin + Thiram, Hexaconazol + Zineb, Hexaconazole + Captan and Tebuconazole + Trifloxystrobin (0.1%) gave 100 per cent result. Among fungal antagonists, *Trichoderma viride* and bacterial antagonists, *Bacillus subtilis* inhibited the maximum mycelial growth of *Alternaria alternata*. Garlic bulb extract, rhizome of turmeric and root powder of asafoetida at 15% concentration gave higher level of inhibition. The efficacy of fungicides, bioagents and botanicals can be further evaluated in combinations of spray options under field conditions.

Key Words : Pomegranate (*Punica granatum*), fruit rotting, anthracnose, *Alternaria alternata*, systemic, non-systemic fungicides, botanicals, bioagents, *Trichoderma viride*, *T. harzianum*, *Bacillus subtilis*, *Pseudomonas fluorescens*.