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Efficacy of fungal, bacterial bioagents and botanicals against brown spot (*Helminthosporium oryzae*) of rice (*Oryza sativa* L.)

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ABSTRACT: Efficacy of four bioagents and two botanicals namely *Trichoderma viride*, *Trichoderma harzianum*, *Pseudomonas fluorescens*, *Bacillus subtilis*, neem leaf extract and neem oil was evaluated against brown spot of rice under field and lab condition. In field condition bioagents and botanicals were used as seed treatment and foliar spray. The seed treatment (ST) *Pseudomonas fluorescens* @ 4g/kg seed + foliar spray (FS) *Trichoderma viride* @ 10g/liter water was found effective with less disease severity of 34.67% and higher grain yield 42.96 q/ha. *In vitro* condition botanicals was observed, neem oil @ 3% was best effective in inhibiting growth of pathogen (54.75%) which was found in food poison technique and dual culture technique. *Trichoderma viride* was most effective in inhabiting the growth of *Helminthosporium oryzae* (61.72%).

Key Words : Brown spot, bioagents, botanical, *Helminthosporium oryzae* and rice.