

Title Eco-friendly management of blue mould rot (*Penicillium italicum*) of kinnow (*Citrus deliciosa*) fruits using biocontrol agents including an unrecorded yeast (*Sporidiobolus pararoseus*) from Rajasthan, India

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Keyword *Trichoderma*; *Gliocladium*; *Bacillus*; *Pseudomonas*

Abstract

Management of blue mould rot (*Penicillium italicum*) of Kinnow fruits explored using biocontrol agents viz. *Trichoderma*, *Gliocladium*, *Bacillus*, *Pseudomonas*, *Debaryomyces*, and *Sporidiobolus* spp. revealed variable efficacy in vitro. On further testing as pre- and post-inoculation treatment, the yeasts showed an edge over other fungal and bacterial spp. with *D. hansenii* and *S. pararoseus* exhibiting 89.12% and 84.12% as pre-inoculation, and 86.37% and 78.26% as post-inoculation treatments, respectively. In general, the pre-inoculation treatment proved more effective perhaps by out-competing post-inoculated (harvest) pathogen(s) for space and nutrients. The yeast strain *S. pararoseus* (KFY-1, MTCC No. 8377, IMTECH, India) has not been recorded so far on Kinnow fruit, hence this seems to be a new record from Rajasthan, India. Further studies are in progress.