

Control of *Penicillium digitatum* on oranges using antagonistic *Bacillus subtilis*

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Abstract

Bacterial strains, isolated from soil and orange peel were screened for antagonistic activity against *Penicillium digitatum*. *P. digitatum* was isolated from oranges with green mold rot symptoms. Various concentrations of the fungal isolate were tested for pathogenicity on orange fruits. A total of 100 bacterial isolates were tested for inhibitory properties by a disc diffusion assay. The results revealed that eight bacterial isolates had antagonistic activity towards *P. digitatum*, and one isolate, identified as *Bacillus subtilis*, provided 60% inhibition of disease on orange fruits. When the physical and chemical properties of orange fruits treated with the isolate were investigated, their color, total soluble solids TSS and titratable acidity (TA) were not significantly different from the controls.