

BIOLOGICAL CONTROL OF BROWN ROT OF CITRUS FRUIT CAUSED BY *Phytophthora citrophthora* BY VARIOUS *Trichoderma* SPECIES

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The fungus *Phytophthora citrophthora*, the cause of brown rot in citrus fruit, usually infects fruit on the lower branches as a result of splashing spores in drops of rain water from the soil. Fruits infected with *P. citrophthora* in the grove usually rot and drop. Those harvested with invisible infections subsequently rot during storage and transport. The recommended postharvest treatment method for control of brown rot in citrus fruits is chemical treatments with Ridomil (Metalaxyl) or Aliette (Fosetyl-Al). As a result of mounting concerns regarding the presence of fungicide residues in the fruit and its implications on human health, the loss of fungicide efficacy due to development of resistance by fungal pathogens and the withdrawal from the market of key fungi-

cides for postharvest use, there is an urgent need for alternative control methods. We have evaluated the use of biological control strategy as an alternative for synthetic chemicals in the control of brown rot of citrus fruit. Following intensive screening of microorganisms isolated from the surface of citrus fruit and soil, several *Trichoderma* species exhibited high efficacy in inhibiting *P. citrophthora* in *in vitro* and in *in vivo* experiments. Results from our study conducted to test the efficacy of the antagonists in inhibiting the development of brown and other postharvest decay, such as the green and blue molds, will also be reported. The mode of action by which the antagonists inhibit the development of the pathogens is still under investigation.