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Preharvest Biological Control of Avocado Postharvest Diseases

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Abstract. **In South Africa biological control is a new approach to avocado postharvest disease control. In this report, the biological approach is evaluated against pre-harvest applications of copper oxychloride. Antagonists *Bacillus lichineformis* and *B. subtilis* effectively reduced stem-end rot, anthracnose, and the *Dothiorella/Colletrotrichum* fruit rot complex when applied as preharvest sprays. Integrated control using copper oxychloride followed by a *B. subtilis* spray later in the season was also effective in reducing postharvest disorders. A *B. subtilis* spray applied four times at 10^8 cells/ml was the most effective treatment in controlling all three postharvest diseases and could even give sustained protection throughout the harvesting season. Reevaluating the same treatments the following year, without repeating the biological and integrated spray programs, the four-time *B. subtilis* treatment gave control comparable to the copper oxychloride treatment, which was repeated.**