

**Title** Using *Pseudomonas* spp. for integrated biological control  
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#### **Abstract**

*Pseudomonas* spp. have been studied for decades as model organisms for biological control of plant disease. Currently, there are three commercial formulations of pseudomonads registered with the U.S. Environmental Protection Agency for plant disease suppression, Bio-Save 10 LP, Bio-Save 11 LP, and BlightBan A506. Bio-Save 10 LP and Bio-Save 11 LP, products of Jet Harvest Solutions, Longwood, FL, contain *Pseudomonas syringae* strains ESC-10 and ESC-11, respectively. These products are applied in packinghouses to prevent postharvest fungal diseases during storage of citrus, pome, stone fruits, and potatoes. BlightBan A506, produced by NuFarm Americas, Burr Ridge, IL, contains *P. fluorescens* strain A506. BlightBan A506 is applied primarily to pear and apple trees during bloom to suppress the bacterial disease fire blight. Combining BlightBan A506 with the antibiotic streptomycin improves control of fire blight, even in areas with streptomycin-resistant populations of the pathogen. BlightBan A506 also may reduce fruit russet and mild frost injury. These biocontrol products consisting of *Pseudomonas* spp. provide moderate to excellent efficacy against multiple production constraints, are relatively easy to apply, and they can be integrated with conventional products for disease control. These characteristics will contribute to the adoption of these products by growers and packinghouses.