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Biological Control of Kiwifruit and Tomato Bacterial Pathogens

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Abstract

Biocontrol of bacterial pathogens is effected by using cupric salts associated with appropriate agronomical practices such as seed certification, irrigation, and fertilization.

In in vitro and in in vivo tests, aqueous extracts from Allium sativum and Ficus carica fruits reduce the survival and the damages (disease incidence and disease severity) caused by bacterial pathogens of kiwifruit (Pseudomonas syringae pv. syringae, Pseudomonas viridiflava) and of tomato (Pseudomonas syringae pv. tomato) plants. In vitro tests, both vegetal extracts show antimicrobial activity against all bacterial strains utilized at different concentrations (10^6 – 10^8 cfu ml^{-1}). In vivo tests Allium sativum and Ficus carica extracts confirm their antimicrobial activity on P. s. pv. tomato reducing DI and DS after two weeks until to 60% and 67% and to 32% and 22%, respectively.

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