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P03.046 The efficacy of biocontrol against *Botrytis cinerea* on tomato depends on the strain of the pathogen

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The objective of the study was to estimate the risk of loss of biocontrol efficacy towards plant pathogens. To this end, the protective efficacy of both biocontrol agents *Microdochium dimerum* and *Bacillus subtilis* (Serenade Max®) was evaluated on tomato against 41 strains of *Botrytis cinerea* differing in their geographic origin, host of isolation and level of aggressiveness. The protective efficacy of *M. dimerum* was evaluated on whole tomato plants after co-inoculation of pruning wounds with *B. cinerea* and *M. dimerum* at the desired dose. Lesion expansion was measured on the stem from the 3rd to the 7th day after inoculation. A very high level of efficacy against all strains was obtained when the biocontrol agent was used at the recommended dose. At a 10-fold reduced application dose, a wide range of sensitivity was observed and a significant correlation was observed between the level of aggressiveness of a strain to tomato and its sensitivity to the biocontrol agent. For *B. subtilis*, tomato leaves were first treated with the biocontrol agent at the desired dose, two days before inoculation with a mycelial agar plug of *B. cinerea*. The resulting lesions were assessed from the 2nd to the 4th day after inoculation. The efficiency of this product was also significantly influenced by the strain of *B. cinerea* but no correlation was observed between the aggressiveness of *B. cinerea* and the protection provided by the biocontrol agent. This study reveals the importance of considering several strains of the pathogen when evaluating the efficacy of biocontrol agents, to obtain a good representation of the pathogen population.

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