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Emerging Microbial Biocontrol Strategies for Plant Pathogens

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Highlights

- Food Security is at risk by an increasing world population and a growing number of crop pathogens
- Biological control options emerge as promising alternatives to assist crops to fight pathogens
- Microbial biocontrol success is inconsistent and depends on a number of environmental, ecological and genetic factors
- This review focusses on plant defense pathways and how biocontrol microbes and plant-associated microbiomes can more consistently assist in this process
- Emerging strategies include long-term plant colonization of biocontrol microbes, microbiome engineering and breeding of microbe-optimized crops.

Abstract

To address food security, agricultural yields must increase to match the growing human population in the near future. There is now a strong push to develop low-input and more sustainable agricultural practices that include alternatives to chemicals for controlling pests and diseases, a major factor of heavy losses in agricultural production. Based on the adverse

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