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Synergistic Approaches for Bioremediation of Environmental Pollutants

Recent Advances and Challenges

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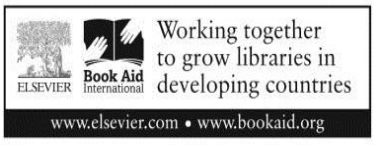

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Abstract

Chemicals such as fertilizers, pesticides, and growth regulators have a prominent position in agriculture. Eliminating such harmful activities would help strengthen and rebuild the current depleted ecosystem. This can be accomplished by using plant growth-promoting microorganisms (PGPMs) instead of chemical agents, while maintaining the chemical agents' core benefits. PGPMs bind to plants and benefit them through a variety of physiological activities resulting in increased growth, health, and yield. PGPMs are superb biosorbents for metal contaminants. They are also essential for increasing organic biomass in the soil. In the antagonism against certain plant pathogens, PGPM feature is successful and reduces the need for harmful pesticides. As a result, PGPMs have the potential to be a useful tool for environmental sustainability.

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Keywords

Environment; Biosorbents; Microorganism; Pesticides; Metal contaminants

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