



Ashok Kumar, Vijay Singh Meena (Eds.)

# Plant Growth Promoting Rhizobacteria for Agricultural Sustainability

From Theory to Practices

- Describes the judicious use of plant growth promoting rhizobacteria together with agrochemicals to enhance agricultural sustainability
- Explains how the large quantities of pesticides, herbicides and fertilizers currently used in food production are not only threatening the environment, but also destroying useful microorganisms in the soil
- Helpful for both academics and practitioners in the fields of microbiology, soil microbiology, biotechnology and agronomy, especially for research related to nutrient solubilization and plant growth promoting activities

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To meet the food security needs of the 21st century, this book focuses on ecofriendly and sustainable production technologies based on plant growth promoting rhizobacteria (PGPR). It is estimated that the global population could increase to 9 billion by 2050. Further, the amount of land devoted to farming has decreased. Soil is a living entity, and is not only a valuable natural resource for agricultural and food security, but also for the preservation of all life processes. Agricultural productivity rests on the foundation of microbial diversity in the soil, and in recent years, PGPR have emerged as an important and promising tool for sustainable agriculture. The injudicious use of agrochemicals by farmers has created a range of negative impacts, not only threatening the environment, but also destroying useful microorganisms in the soil. The efficient use of PGPR reduces the need for these chemicals while simultaneously lowering production costs. In turn, increased yields could provide a more favourable environment and encourage sustainability.

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