

Microbial Management of Methane Mitigation in Rice Field Microcosm

Bharti Rohatgi¹ and Rajeev Kaushik^{2*}

^{1,2} *Division of Microbiology, IARI,*

**Corresponding Author*

Abstract Agriculture sector is the major contributor to methane emissions both in India and globally. This includes emission from livestock related activities, rice paddy cultivation and biomass consumption. Rice being the staple diet of over 40% of the world's population is the most important food crop and due to the demands of the growing human population, cultivation of wetland rice will continue to increase in future. Thus it has become increasingly important to reduce the net methane emissions while maintaining the productivity and efficiency of rice production under more volatile production conditions due to climate change. Methane utilizing microorganisms or methylotrophs are promising candidates for reduction of methane emission. We review the present scenario and potential of using methylotrophs for this purpose and discuss emerging research directions.