ACKNOWLEDGEMENTS

I wish to express my deep sense of gratitude to Dr. N. Sethunathan, F. N. A., F. A. Sc., ex-Principal Scientist and Dr. T. K. Adhya, FAAS, Senior scientist, Central Rice Research Institute, Cuttack for their invaluable guidance and constant encouragement at all stages of this investigation.

I am grateful to Dr. K. C. Mathur, Director, CRRI, Cuttack and the former Director Dr. B. Venkateswaralu for providing requisite laboratory, field and library facilities for completion of this pursuit.

My sincere gratitude and acknowledgments are due to Dr. V. R. Rao, FAAS, Principal Scientist and head, Division of Soil Science and Microbiology, CRRI, Cuttack and Dr. B. Ramakrishnan, Scientist for their valuable suggestions and encouragement during the course of the study.

I record my sincere thanks to Dr. S. K. Mohanty, Dr. A. K. Mishra, Dr. R. N. Dash, Dr. S. Mahato of Division of Soil Science and Microbiology, CRRI, Cuttack for extending help.

I wish to express my sincere thanks to Dr. A. P. Mitra, Dr. D. C. Parashar of National Physical Laboratory, New Delhi for providing the close chamber system and other accessories used for estimation of methane emission from rice fields.

I take this opportunity to express my immense gratitude to Mrs. Reema Sethunathan and Mrs. Khuku Adhya for their affection and encouragement during the course of this study.

I wish to express my thanks to my fellow scholars in the Soil Microbiology Laboratory, CRRI for their continued help and moral boosting to make this endeavor successful.

Last, but not the least, I avail this opportunity to thanks to my parents and sisters for their patience and sacrifice which led to fulfill my long cherished desire.

Any omission in this brief acknowledgment does not imply ingratitude.

(SABITA RANI MISHRA)