Acknowledgement

I would like to express my deep sense of gratitude to my research guide Dr. H. C. Lakshman, Professor and former Chairman, P.G. Department of Studies in Botany, Karnataka University, Dharwad for esteemed guidance, support and encouragement from the initial to the final level enabled me to develop an understanding of the subject.

I express my deep gratitude and thanks to Dr. Ch. Ramesh, Professor and Chairman, P.G. Department of Studies in Botany, Karnataka University, Dharwad, for providing the necessary facilities in the Department. My sincere thanks are also due to our former chairman’s Prof. G. R. Hegde and Prof. H. Niranjan Murthy

I am thankful to my beloved teachers Prof. M. Jayaraj, Prof. T. C. Taranath, Dr. S. N. Agadi, Dr. G. S. Mulgund and Dr. D. Thangaduari.

I am grateful to my lab mates for the whole hearted cooperation and help during my research. In particular my thanks are due to Dr. V. S. Bheemareddy, Dr. Mahesh. B. Sri. M.A. Kadam, Mr. Channabasava, Miss. Puspha, Miss. Shweta, Miss. Romana and Miss. Jayashree.

I am grateful to my co research scholars in the Botany Department and research scholar from other department for their cooperation and nice company.

I owe my respectful gratitude to my mother, Smt. Savitramma and father, Sri. Maruthyappa. K, for their affection, constants enthusiastic encouragement and moral support throughout this undertaking.

I greatly acknowledge the help and moral support extended by my friends Miss. Suma. M. Miss. Savita, Mr. Satish, Mr. Ravi, Dr. Vinaya, Mr. Chandru, Mr. Annada, Mr. Umesh, Dr. Santosh, H, and Mr. Deepesh,

I acknowledge with grateful thanks to Dr. P. A. Hosamani, Assistant Professor, Bangur Nagar Degree College, Dandeli and Dr. S.B. Gadi, Associate Professor J.S.S. College, Dharwad for their constant encouragement.

I am indebted to the seed production unit, University of Agricultural Sciences Dharwad and Central Research Institute for Jute & Allied Fibers (CRIJAF) Kolkata for providing germplasm and Institute of organic farming, University of Agricultural Sciences Dharwad for providing microbial inoculants. I also extend gratitude to Harihar Polyfibers (Aditya Birla Group) for providing the fly ash.

I am grateful to U. G. C. New Delhi, for awarding RFSMS fellowship in Science and financial support. Last but not certainly not least I am indebted to non teaching staff for their constant help.

Date: -05-2012.
Place: Dharwad.

(Sandeepkumar. K)