ACKNOWLEDGEMENTS

Taking any research programme from conceptualisation to final report writing is an interdependent effort and I have many to thank for their valuable help and support in the present case also.

Dr R Deb Roy, Ex-Director, National Research Centre for Agroforestry, Jhansi and Senior Consultant (Forestry/Agro-forestry) A F C New Delhi, my supervisor, provided all the conceptual foundation for this work. I have a great pleasure in expressing my deepest and profound sense of gratitude to him for his personal support, active participation and the congruence throughout the study.

Dr Panjab Singh, the then Director, Indian Grassland and Fodder Research Institute Jhansi, granted me the administrative permission for higher studies and study leave for the purpose. I am deeply indebted to him for his constant support and encouragement.

Dr C B Singh, Head, Division of Plant Improvement, IGFRI, Jhansi has had profound influence on this study having provided seasoned advice on technical issues and personal encouragement. I am grateful to him.

Dr Bhag Mal, Director IGFRI gave valuable encouragement and support in weaving pragmatism into these pages. I am thankful to him for all his help.

Dr K R Solanki, Director NRCAF, Jhansi gave many valuable suggestions in finally shaping the manuscript and I would like to record my gratitude for this favour.

Dr S R Gupta

Dr R.P. Singh, Dr S N Zadoo, Dr P Rai helped me with their mature advice and talented guidance. I am highly thankful to them.

My friends from IGFRI and NRCAF have contributed in many ways, I would be failing in my duties if I do not acknowledge the helping hands extended by Dr/ Sh A K Shrivastava, A K Roy, G P Shukla, V Rama Murthy, Sanjeev Gupta, P K Katryar, G P Nigam, P. K. Dwivedi without which all my efforts would not have taken the present shape. I have a deep sense of gratitude for them.
Sh Balram and Sh Jagdish assisted me in field activities. Sh Venny Joy and Sh K P Rao provided skillful assistance in organising this thesis. I wish to thank them for this help.

My wife Shashi Prabha, son Udit, daughters Deep Shikha and Poonam during this course of study willingly shared the household responsibilities and allowed me tension free time to concentrate on my studies. They had been constant source of encouragement and deserve a special mention here. Special thanks to Sh R P Singh, my elder brother and Sh M M Agrawal, Kakashree for their encouragements.

Many other colleagues and friends too numerous to name, contributed ideas and comments throughout this study and for bringing the manuscript in its ultimate shape. For those unsung contributors I am grateful.

(U.P.Singh)