

Acknowledgement

*I deem it a matter of great pleasure to express my profound gratitude to my advisor **Dr. Kishore S. Rajput**. You have been a tremendous mentor for me during my journey to success. I would like to thank you for encouraging my research and helped me to grow as a research scientist. Your advice on research as well as on my career have been invaluable.*

*I express my deep sense of gratitude to **Dr. Parmeshwar L. Saran** (Principal Scientist, Horticulture, ICAR-DMAPR, Boriavi, Anand, Gujarat) for giving me an opportunity to work under his guidance in SERB-DBT project entitled "Studies on burl: An unresolved woody disorder of mango trees in India" and helped me to improve my thesis by giving his valuable suggestions and comments.*

*I am thankful to **Prof. N. S. R. Krishnayya**, Head of Department of Botany, for giving me permission to work with other departments and institutes of Gujarat State by signing my application forms. I especially want to thank **Prof. G. Sandhya Kiran** for giving me permission to work in Botany department for my Ph.D. degree during their head tenure.*

*I am also thankful to **Prof. Vinay M. Raole** and **Dr. Dharmendra G. Shah** for giving me an opportunity to work under their guidance for completing departmental course work. I gained a lot from their vast knowledge of scientific research.*

*I am also thankful to all other **Teaching** and **Non-teaching** staff of the department of Botany for helping me to make this study possible.*

I thank my laboratory members, all of those with whom I have had pleasure of work during this and other related projects. Each member has provided me extensive personal and professional guidance and taught me great lessons about both scientific research and life in general.

*I am heartily thankful to my colleagues **Dr. Sachin Patil, Ajit Vasava, Ronak Kachhiyapatel, Ravi Patel, Amit Gondaliya, Dhara Ramoliya** and **Shruti Patel** who always helped me whenever I needed. I especially thank **Ronak Kachhiyapatel**, who helped me in each and every step from joining the lab to submission of my Ph.D. thesis.*

*Last but not least my sincere regards and gratitude to my respected parents **Shri Ram Chandra Choudhary** and **Smt. Indra Choudhary**, without their blessings this work would have been incomplete.*

*And at last, I am cordially thankful to my most beloved wife **Smt. Deepa Poonia**, daughter **Paridhi Ola** and son **Dev Krishna Ola** for their cooperation, enthusiastic encouragement, forbearance and understanding during my entire period of studies.*

Shiv Pratap Choudhary