ACKNOWLEDGEMENTS

I would like to gratefully acknowledge my mentor Dr. Moinak Banerjee for his excellent guidance and encouragement which he had given throughout my research. I always enjoyed the freedom he gave me, during designing and executing all my experiments. I take this opportunity to thank him for the confidence he laid on me and my research ideas.

I express my sincere gratitude to our founder director Dr. M. R. Das and former Director Dr. R. V. Thampan for giving me an opportunity to choose my research career at RGCB.

I thank Dr. M. Radhakrishna Pillai, Director, RGCB for the infrastructure and research facilities provided throughout my research work.

I am very thankful to Sujatha Bhaskaran, Seetha K. and Sreekumar E. for their help and advice during the initial stage of my research work. It is a pleasure to thank my lab members Neetha, Linda, Lekshmy, Anila, Asha and Pravi for creating an interactive and lively environment in the lab.

I would like to specially thank my best friends Pradeep, Sreejayan, Jinesh and Febin for all the laughs and stimulating discussions. The encouragement and support given by my seniors Anitha, Poosree, Rasmi and Avinash were invaluable. I would like to thank my roommate Radhakrishnan for motivating healthy scientific discussions. I am very much thankful for the companionship of my friends Bhanu, Prathiba, Prasanth, Durga, Mohan, Wills, Manoj, Sebastian, Kiran, Biljo, Steephan, Suma, John, Maju, Sanal, Smitha, Arun and Ratheesh, who will always be cherished.

I am thankful to all the senior scientists who had interacted and given their valuable suggestions during my work presentations.

I gratefully acknowledge Dr. V.V Sudheendrakumar and Dr. T.V Sajeev at KFRI, Peechi for their help in collecting samples and providing ecological data regarding the outbreaks in Nilambur teak plantations.

I would like to thank Dr. Purushothaman, Dr. Ajay Kumar and Dr. Sugunan for their help and company.
I thank Manoj P, Bindhu, Sudha, Saravan, Antony and other technical staff who had helped me by extending technical support. I extend my thanks to the instrumentation wing and staff of the library for their support. It is my immense pleasure to convey my thanks to all the administrative staff and purchase section staff for their help. I also acknowledge the support and cooperation of security and cleaning staff.

The financial assistance from the DBT, RGCB and ICMR is gratefully acknowledged.

This thesis, is not only reflection of my work, it is a testimony to the love, patience and faith that my parents have shown to me over these years. I would like to thank my sister, my brother-in-law and my beloved brother who always encouraged me in my ups and downs.

Last but not the least I thank GOD Almighty for providing me enough patience and strength during my stay in RGCB. Throughout the duration of my study, whenever I needed a shoulder for sympathy or an ear for my frustrations or a smile for my encouragement or money for my urgent need there will be always someone to help me in his form... He gave me nothing what I wanted, but gave me everything what I needed.

Chandrasekhar