ACKNOWLEDGEMENTS

I extend my sincere gratitude and appreciation to many people who made this thesis possible.

I would like to gratefully acknowledge Dr. Raghava Varman Thampan, my research supervisor, for the enthusiasm, inspiration and guidance which was always there when I needed it. His patience, continual support and encouragement have kept me going during the entire period of my work.

I am grateful to Dr. M. Radhakrishna Pillai, Director, RGCB for all the facilities and help extended to me.

I am thankful to our founder Director, Late Dr. M. R. Das, for giving me an opportunity to choose my research career at RGCB.

I am grateful to Dr. S. Sreeja for her help and support during the course of my research work.

I would like to thank Dr. Karunagaran, Dr. Omkumar, Dr. E. Sreekumar, Dr. Ruby John Anto, Dr. T. R. Santhosh Kumar and all other scientists for their help and suggestions.

I am indebted to my colleagues in the lab Dr. Jaya, Dr. Lakshmi, Dr. Anitha, Sebastian, Lakshmi, Sony, Deepa, Shameem, Febin, Vidya, Priya, Sreeja, Vishnu and Anju for their wholehearted help and support.

The support and cooperation of Staff of Administration, Instrumentation and Technical group, Library, Stores and Purchase Section and DISC of RGCB is gratefully acknowledged.

Thanks are due to Mr. Vinod Lal for procuring tissue for experimental work and Mrs. Shailaja for help in glassware washing and maintenance.

I would like to thank my batch mates Marie, Nisha, Renjini, Rajeev, Avinash, Rashmi, Aswathy and Suma, who made my years at RGCB a memorable one.

Thanks are due to Kavitha, Deepthi, Dicto, Mani, Nisha, Sachidanandan, Bhavya, Ambika, Jinesh, Suby, Mohan, Maya chechi, Pradeep, John, Stephen, Suma.......for their help and support.

The financial support from RGCB and CSIR is gratefully acknowledged.

I am indebted to my parents, brother, husband, grand mother, and my in laws for being there always for me with their understanding and encouragement. Without their unconditional love and support this thesis would never have been possible.

Julie