ACKNOWLEDGEMENT

I express my deep sense of gratitude and indebtedness to my Guide and Supervisor Dr. S. NATARAJAN, M.Sc., M.Phil., Ph.D., Associate Professor and Head, Department of Plant Biology and Plant Biotechnology, G. S. Gill Research Institute, Guru Nanak College, Chennai - 600 042, for giving me an opportunity to work under him on this useful topic and providing me ample guidance and support throughout the course of this research. I am grateful for his guidance, encouragement and continual support throughout my research work.

My sincere thanks to THE SECRETARY AND CORRESPONDENT, THE PRINCIPAL and THE DIRECTOR of Guru Nanak College, Chennai - 600 042, for permitting me to do the research in this esteemed Institution.

I am very much thankful to, Dr. A. SETHURAMAN, Dr. V. UMA RANI, Dr. M. GOP, and Dr. POONAM SETHI, Department of Plant Biology and Plant Biotechnology, Guru Nanak College, Chennai - 600 042, for their support and help during the course of my study.

I express my deep sense of gratitude and indebtedness to Dr. K. P. SANJAYAN, Dr. M. G. RAGUNATHAN, Dr. J. JAYANTHI Department of Advanced Zoology and Biotechnology, Guru Nanak College, Chennai - 600 042.

I also extend my thanks to my Research Unit Dr. H. SHAKILA, Dr. E. GAYATHRI, Dr. S. SELVADASS, Dr. B. BHARATHI, Dr. V. DEVI. Ms. R. PUSHPAKARANI, Ms. S. ANNAPOORNA, Mr. P. PALANIAPPAN, Mr. M. PANDIYAN, G. S. Gill research Institute, Guru Nanak College, Chennai -42, for their help and cooperation during the tenure of my work.

I thoughtfully thank the laboratory assistants Mr. P. MURUGAN, Mr. A. ANANDAN and Mr. P.AYYAPPAN.
Wholeheartedly I convey my deep sense of gratitude to my parents and each and every member of my family.

I express my very special thanks to my beloved friend Dr. C. B. NIRMALA and Dr. V. MOHANKUMAR for their unconditional support throughout this work.

My sincere thanks to Dr. NARENDARSIVVASWAMY, for introducing me to the papaya plantation owners and growers, Mr. SUBBU NATARAJAN and Mr. T. Pandi.

I happily thank the Pakkar brothers - Naveed Khaiyyum and Syed Khaiyyum for extending their best help in the tanneries.

I thank two people very specially for their companionship - they are; Ms. R. VIJAYALAKSHMI and Ms. SHANTHI NATARAJAN.

I happily thank Ms. M. Rajeswari (Students Xerox Velachery), for assisting me formatting the thesis.

Finally I extend my sincere thanks to each and every soul that directly or indirectly helped me achieve this wonderful feat.

My dutiful thanks are to the following Institutions and Organizations:

**SABA TANNING CHEMICALS, MADRAS -600 029.**

**PAKKAR LEATHERS, VANIYAMBADI-TN.**

**VETERINARY COLLEGE, MADRAS -600007**

**ICAR-CIBA, MUTTUKKADU, KOVALAM, TN.**

Praise and Glory to the Almighty, Greetings and Salutations to Prophet Muhammad (Peace and Blessing be upon him).

K.KAIRUNNISA