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**ROOT DISTURBANCE AND WASHING EFFECTS ON SHOOT AND
ROOT GROWTH IN FOUR PLANT SPECIES**

A thesis presented in partial fulfilment of the requirements for
the Degree of Master of Applied Science
at Massey University
New Zealand

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1998

Abstract

Bare-rooting techniques have been widely use in New Zealand nursery production for the preparation of live plants for export to overseas or domestic markets. Bare-root transplants can fail quality requirements due to death or deterioration of regrowth following repotting. The potential for improving bare-root nursery stock quality has prompted study of the morphological effects of removed medium treatment on plant. Two experiments were conducted to explore the effects of physical root disturbance by shaking and washing on the growth and development of camellia (*Camellia* × *saluenensis* cv. 'Donation'), pittosporum (*Pittosporum tenuifolium* cv. 'Kohuhu'), pumpkin (*Cucurbita pepo* cv. 'Crown Hybrid'), and coleus (*Coleus blumei*). The shaken plants in both dry and wet conditions suffered a reduction in the growth rate of their leaves compared to the unshaken controls. Root washing influenced the vegetative growth of four species and reproductive growth of pumpkin. The two woody species were more sensitive to treatment stress. Very short time of washing (three seconds) affected camellia bud break and new shoot growth, and inhibit pittosporum root and shoot growth. Similar effects were not sosevered in coleus and pumpkin.

DEDICATION

THIS THESIS IS DEDICATED TO MY DEAREST
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Acknowledgements

I would like to express my sincere gratitude to my supervisors Dr Bruce Christie and Dr John Clemens, for their great supervision, guidance, understanding, and support throughout this study.

I am also grateful to all the staff and graduate students in Department of Plant Science, Massey University, for their providing good study environment and friendly help. Grateful thanks go to Ray Johnstone and other staff at the Plant Growth Unit, and Alison Winger, for providing technical assistance.

My particular appreciation to the financial assistance from a Helen E. Akers Scholarship and a Massey Masterate Scholarship for my study.

I would extend my sincere thanks to Professor Nigel H. Banks, Associate Professor Ralph E.H. Sims and his wife, Cathy, for their encouragement and enthusiastic support in various ways. My friends, both in China and in New Zealand, their friendship and help cannot be forgotten.

There is a special place for my family in China. I am indebted to my mother, for the inspiration and all the opportunities she avails to me. I am also indebted to my sisters for the support, encouragement, and for taking care of home during my study in New Zealand. I am extremely indebted to my dearest father, who died in an accident while I studied for this degree here.

Finally, a very special thank to my husband, Lanbin Guo for his love and selfless support and encouragement, and to my son, Kevin S. Guo for bringing our family cheer and happiness.

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