EFFECT OF POTASSIUM CHLORATE ON PHYSIOLOGY OF LONGAN ROOT

DARANEE KIATSAKUN

A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN HORTICULTURE

adans university

Copyright by Chiang Mai University

All rigraduate school reserved

CHIANG MAI UNIVERSITY

FEBRUARY 2004

EFFECT OF POTASSIUM CHLORATE ON PHYSIOLOGY OF LONGAN ROOT

DARANEE KIATSAKUN

THIS THESIS HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN HORTICULTURE

EXAMINING COMMITTEE
CHAIRPERSON
Assoc. Prof. Dr. Tragool Tunsuwan MEMBER
Asst. Prof. Dr. Pittaya Sruamsiri Tanachai Panhasen MEMBER
Lect. Dr. Tanachai Pankasemsuk Soroya Ruamrung 2: MEMBER
Asst. Prof. Dr. Soraya Ruamrangsri MEMBER Asst. Prof. Dr. Wichian Pooswang

10 February 2004
© Copyright by Chiang Mai University

Acknowledgement

I greatly thank Assoc. Prof. Dr. Tragool Tunsuwan research advisor, Asst. Prof. Dr. Pittaya Sruamsiri, Lect. Dr. Tanachai Pankasemsuk and Asst. Prof. Dr. Soraya Ruamrangsri for their suggestions, teaches and encouragement to conduct this research immensely and also Asst. Prof. Dr. Wichian Pooswang for comments to improve the accuracy of this dissertation.

I would like to thank Asst. Prof. Dr. Bantoon Warit and Assoc. Prof. Kesinee Ramingwong for their comments, Asst. Prof. Dr. Pimchai Apavatjrut for kindly lending me a photosynthetic measurement apparatus, Asst. Prof. Dr Jamnong Uthaibutra and Dr. Sermsakul Pojanagaroon for the laboratory help and advice. I also thank Ms. Pornrat Sirikhum and the officers of Horticulture laboratory and nursery and Central laboratory of Agriculture, Chiang Mai University.

I thank Ms. Suwimon Torapicharttrakool, Ms. Benjawan Chutichoodet, Ms. Amonnat Chattrakul, Mr. Winai Wiriya-alongorn, Mr. Mitchai Thabudda, Mr. Bongkarn Panpeng, Ms. Rumjuan Sriwichi, Ms. Wipada Sangsoi, Ms. Jongpranorm Sripromma, Mr. Nimitchai Sripromma, Mr. Witaya Silapasomboon, Ms. Jarin Sittichoke, Dr. Teerawan Worapongsittikul, Ms. Maturode Sumranpon and all friends and colleagues who are not mention for their helpful and encouragement.

I am grateful to my father, mother, great sister, brothers, niece and nephews for their understanding, encouragement and helpfulness during many years of this Ph.D. research.

This research was partially financial funded by the Postgraduate Scholarship of Graduate School, Chiang Mai University.

Daranee Kiatsakun