

IMMUNOPROTECTIVE EFFECTS OF TREE EXTRACTS ON BANANA,
INFECTED BY POST-HARVEST PATHOGEN
Colletotrichum musae

NOR HEZLIH BINTI HASSAM

bpd
LP
20
FASM
2
2009

MULTIMEDIA TEKNOLOGI DAN SAINS ALKIMIA
UNIVERSITI MALAYSIA TERENGGANU

2009

7560

1100076529

Perpustakaan Sultanah Nur Zahirah
Universiti Malaysia Terengganu (UMT)



bpd

LP 20 FASM 2 2009



1100076529

Inhibitory effects of neem extracts on banana, anthracnose
postharvest pathogen *Collectotrichum musae* / Nor Hazlin
Hassan.

PERPUSTAKAAN SULTANAH NUR ZAHIRAH
UNIVERSITI MALAYSIA TERENGGANU (UMT)
21030 KUALA TERENGGANU

| | | |
|-----------|--|--|
| 100076529 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Lihat sebelah

HAK MILIK
PERPUSTAKAAN SULTANAH NUR ZAHIRAH UMT

1100076529

INHIBITORY EFFECT OF NEEM EXTRACTS ON BANANA, ANTHRACNOSE
POSTHARVEST PATHOGEN *Colletotrichum musae*.

By
Nor Hazlin Binti Hassan

Research Report submitted in partial fulfillment of
the requirements for the degree of
Bachelor of Agrotechnology Science (Post Harvest Technology)

Department of Agrotechnology
FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE
UNIVERSITI MALAYSIA TERENGGANU
2009



**FAKULTI AGROTEKNOLOGI DAN SAINS MAKANAN
UNIVERSITI MALAYSIA TERENGGANU**

**PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK ILMIAH I DAN II**

Adalah ini diakui dan disahkan bahawa laporan ilmiah bertajuk:

INHIBITORY EFFECTS OF NEEM EXTRACTS ON BANANA, ANTHRACNOSE
POSTHARVEST PATHOGEN *Colletotrichum musae*

oleh NOR HAZLIN BINTI HASSAN, No.Matrik UK 13003 telah diperiksa
dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan
AGROTEKNOLOGI sebagai memenuhi sebahagian daripada keperluan
memperolehi Ijazah Sarjana Muda
SAINS AGROTEKNOLOGI (TEKNOLOGI LEPAS TUAI), Fakulti Agroteknologi
dan Sains Makanan, Universiti Malaysia Terengganu.

Disahkan oleh:

Penyelia Utama

Nama: DR. CHUAN TSE SENG
Pensyarah

Cop Rasmi: Jabatan Agroteknologi,
Fakulti Agroteknologi dan Sains Makanan
Universiti Malaysia Terengganu
21030 Kuala Terengganu

Tarikh: 26.4.09

Penyelia Kedua (jika ada)


Nama:

Cop Rasmi

Tarikh:

DECLARATION

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledge.

Signature : 
Name : Nor Hazlin Binti Hassan.
Matric No : UK 13003.
Date : 27 April 2009

ACKNOWLEDGEMENT

Firstly, I would like to take this opportunity to express my sincere appreciates and thank to my supervisor, Dr. Chuah Tse Seng for his continuous comments, patients thought and guidance. Without support and guide from him, my project cannot run smoothly. Besides, I would like to express my sincere thanks to the examiners for their patience in reviewing my thesis. I would also like to extend my gratitude to the laboratory assistant, Mr. Ruzairie, Mr. Mohd Fauzi for their kindly help and guidance.

The appreciation is also extended to my beloved family especially to my parents, Hassan Bin Mohd Zaini and Che Iran Mahamad for understanding my project and support as well as the tower of strength in my hour of needs. Last but not least, to my friend Muslihati Pardi and Zurafni Mat Daud, all my coursemates and those who have contributed to this project. Thank you so much.

ABSTRACT

Plant extracts for the control of plant disease are emerging as alternatives to conventional fungicide as they are generally safe to humans and environmentally friendly. Extracts of neem (*Azadirachha indica*) leaves were screened *in vitro* and *in vivo* against the fungal banana pathogen, *Colletotrichum musae*. Neem extracts inhibited mycelial growth of *C. musae*. *A. indica* extract at 20% concentration completely inhibited the growth of *C. musae*. Thus, this fungistatic concentration of neem extract was tested *in vivo* at room temperature (28°C) against anthracnose disease on the banana (*Musa sepientum* cv. Berangan). Neem extract was found to be very effective in reducing the incidence of disease better than a standard treatment with the fungicide benomyl. Neem extract showed lowest values on physical-chemical parameters such as chroma, firmness and total soluble solid compared with banana treated by benomyl and control. However, these neem extract was suitable to be used as biofungicide on inhibition of *C. musae* that cause anthracnose in bananas.